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By E. SIBLY, M. D. Fellow of the Harmonic Philosophical Society at PARIS; and
Author of the Complete ILLUSTRATION of ASTROLOGY.

HAPPY THE MAN, WHO, STUDYING NATURE'S LAWS,
THROUGH KNOWN EFFECTS CAN TRACE THE SECRET CAUSE.

DRYDEN.

L O N D O N:

PRINTED FOR THE AUTHOR, AND SOLD AT THE BRITISH DIRECTORY OFFICE, AVE-
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TO THOMAS DUNCKERLY, Esq.

PROVINCIAL GRAND MASTER

OF THE ANCIENT AND HONOURABLE FRATERNITY OF
FREE AND ACCEPTED MASONS OF DORSET, ESSEX,
GLOUCESTER, SOMERSET, BRISTOL, SOUTH-
AMPTON, AND THE ISLE OF WIGHT.

S I R,

PRESUMING on the well-known goodness of your Heart, and that liberality of Sentiment, which renders your Actions, like your Descent, NOBLE, permit me to solicit your protection to a Work, which, though of the first Importance in the Cause of Humanity, will acquire new Vigour under your Auspices, and dawn forth with accumulated Lustre under the Shield of your Arm; which, like that of the good Samaritan, is ever reached out to administer Comfort and Relief to your afflicted Fellow-Creatures.

It has been a long-established Maxim among civilized Societies, to submit to their President whatever is thought conducive to the general Good. You are the illustrious Head of many respectable Lodges of free and accepted Masons, whose Care it has been to cherish a Contemplation of the deep Mysteries of Nature, from Time immemorial.

morial. And, though the Body of this invaluable Work is not of my Production, yet, should the Notes and Illustrations, and the other Improvements now made to it, be thought worthy of your Approbation, or of the Notice of my masonic Brethren, I trust they will find in them an ample store of Precepts, whereby the blessings of Health might be universally dispensed, and the happiness of Mankind more permanently secured; to promote which is the leading Feature of masonic Principles.

Should this important Object be obtained, and medical Knowledge be diffused through the Empire in its pure and pristine State, disrobed of its ambiguous Dress, and made the Friend of every Family---my Heart will rejoice, and my utmost Desires be accomplished.

Wishing you internal and external Happiness in the terrene Lodge here, and eternal Joy and Glory in the divine *Sanctum Sanctorum* above, permit me publicly to assure you how unfeignedly I am,

S I R,

Your most humble

and devoted Servant,

T H E P R E F A C E .

DISEASE is undoubtedly the most fatal enemy of mankind. To prevent its approaches, or to overcome its attacks, is perhaps the most important concern of our lives; and an inquisition that appears only attainable by the most natural and simple means. For this purpose Mr. Nicholas Culpeper's ENGLISH PHYSICIAN seems peculiarly well adapted; since it resorts, for every mode of Cure, to that infallible source prepared by God and Nature, in the vegetable system; whence flow spontaneously the genuine Virtues of Medicine, diffused universally over the face of the whole earth, *where nothing grows in vain!*

Indeed, had this ingenious and most invaluable Work no other recommendation than having passed through so many editions, yet would it sufficiently justify my offering it once more to the notice and consideration of an enlightened public. But, when we reflect on the discoveries since made in the botanical world—the great acquisitions derived to the Work by the addition of upwards of one hundred newly discovered aromatic and balsamic herbs—independent of the physical skill and philosophical perception displayed by its Author, we shall find innumerable instances of its utility, and perceive in it a fund of information and medical acquirements, which promise the most extensive benefits to society, by forming a *Domestic Physician* in every Family.

It might perhaps have been replete with the happiest consequences to our beloved King under his late infirmity, and would unquestionably have tended more quickly to dispel the painful apprehensions of his afflicted people,

ple, had this great Master of human nature been contemporary with us. No man, I believe, but the *professionally* envious, will presume to question his medical abilities, or prescribe limits to his physical knowledge, which eclipsed the practice of every physician of his day, and put to silence the whole tribe of empirics and quacks. I cannot give a higher proof of his professional discernment, nor any thing more applicable to the anxious feelings of my reader, than by shewing how exactly he has pointed out the disorder with which his Majesty was lately afflicted, and the simples which are applicable to its several stages, so exact and critical, that, if he had been living, and appointed one of the consulting physicians, he could not have marked the outline of it with more precision.

He distinguishes diseases which produce phrenzy into three different classes; the second he terms *periphrenetio*. He describes it thus: "It is preceded by a very sharp fever, which will rage for a few days violently: when it subsides, the delirium takes place with fits of the fever at irregular intervals; the patient will be remarkably voracious; all his passions will be very strong; his lucid intervals short; his sleep seemingly of a long duration, but, in fact, this sleep is nothing but dosing; when he awakes he will seem fully occupied with some favourite subject, such as singing, hunting, dancing, &c. His recollection will sometimes serve him so as to know particular persons, but that will not last long."

After having described the effect of the disorder, he next enters minutely into an investigation of the seat of it. And here, with his usual severity against his brethren, the physicians, he says, "They, poor ignorant men, think this is a disorder *in the head*, whereas, in fact, it arises from an injury which is received in the diaphragm, or midriff. The use of this membrane is (besides sustaining the upper parts of the abdomen) to convey cooling moisture to the brain, in order to cool the hot humours which fly to it from the several parts of the intestines, and particularly

ticularly the liver. Now, if the diaphragm be strained, bruised, or otherwise hurt, it consequently fails in performing its function, and the brain will suffer a delirium, more or less, in proportion as the disorder in the diaphragm is better or worse."

He then states the manner in which this malady may arise. "It may happen by overlifting, by fighting, by violent riding, by want of a proper quantity of nourishment, whereby the membrane loses its tone and vigour, and fails in its duty. Hence the first symptoms of approaching death, which appears in people who are starved, is a delirium, which is occasioned by a heat in the brain, for want of proper moisture from the midriff."

He next points out the remedy, which he confesses is very difficult; inasmuch as the midriff, being a membrane only, will not yield to the same remedies that the muscular part of the body will. Having a view towards "keeping the fever under, the internals should be strengthened by nourishing aliment. The chest and abdomen rubbed with aromatic and corroborating oils—the habit prevented from being too lax—and the bowels, if tending to lassitude, should be bound up, and kept in due tone."

He then gives a variety of oils and simples, which are extremely useful in this disorder; and concludes with advising constant attention to the patient; to indulge his desires as often as it may be done with safety, but not to disturb his intestines with too much physic, and thereby weaken and injure, instead of relieving, the patient.

In a similar way does this learned author proceed in the treatment of all the infirmities incident to mankind, carefully pointing out, by anatomical rules, the *seat* of the disorder, and then applying such simple medicines and regimen as Nature herself directs, without exposing the patient to the danger of violent experiments, or torturing his intestines

with irritating drugs, which instead of effecting a cure, often augment the disease, and not unfrequently occasion premature death.

Some authors have laboured to prove, that the difference of opinion betwixt Culpeper and his brother physicians originated entirely from his own surly and vindictive disposition. But whoever has taken the pains to investigate the controversy, will find this assertion most remote from the truth. He found the *practice* of *physic* directed more by terms of art than by principles of nature; and governed more by avarice than by a genuine desire of restoring health and strength to the desponding patient. He condemned this practice, by exposing the wickedness of some and the ignorance of others; and, though he had the whole medical *corps* to encounter, yet such was the force of his reasoning, and the superiority of his abilities, that they submitted to the sentence he had passed upon them, without the formality of a defence.

But, after a while, the allied sons of *Esculapius*, having discovered that Mr. Culpeper's practice was guided by astrological precepts, rallied again, and renewed the combat with accumulated fury. Every insulting reflection, calculated to impeach his understanding, was levelled at him; and the occult properties of the celestial system were ridiculed and denied. Our author, however, was not to be driven so easily from his purpose. He immediately published a tract in defence of the astral science, which he maintained against the united opposition of both the Colleges; and, by introducing it into his practice, he performed cures which astonished his competitors, and rendered his name immortal.

Experience, therefore, ought to convince us, however opposed by abstract reasoning, that there is indisputably an innate and occult virtue infused into all sublunary things, animal, vegetable, and mineral, by the action of the heavenly bodies upon the ambient and elementary matter, which, by the motions and mutations of the luminaries being constantly varied,

varied, produce that astonishing variety in Nature, which is infinitely beyond our knowledge or comprehension. Hence arise the sympathies and antipathies so astonishingly conspicuous in all the productions of the earth whether animate or inanimate, in men or brutes, in vegetables or minerals and in every species of matter definable to our senses. Here also we discover the *essential properties* and *first ground* of all medicine, and are furnished with the best reasons why it is impossible to prescribe remedies at all times applicable to the stupendous varieties afflicting the body of man, without the aid of sydereal learning.

There is no doubt but the remote as well as the propinquate causes of things ought seriously to be investigated both by philosophers and physicians; or else the music of science will often fail of its harmony, and produce discord and disgust. The planetary influx, and the force of the ambient, is as necessary to be consulted, as the structure of the body, and the laws of pulsation; otherwise our practice will be imperfect, and our success determined by chance. For this reason, the learned *Senertus*, in his *Elements of Physic*, highly commends those modern physicians, who unite astrological with medical knowledge: “For,”—continues this ingenious author,—“the stars act upon inferior bodies not only by heat and light, but by *occult* influence;—nor can it be doubted but that all plants are under the government of some particular planet, and perform their operations by virtue of the sympathy co-existent in their nature.”

By the right knowledge of times and seasons, of causes and effects, the most important cures have unquestionably been performed. “No man, says Galen, can reasonably deny, but that the natural ground of medicine and disease depends much upon astral influx and elementary impression; and hence it is, that, by the nativity or decumbiture of the patient, we are enabled to discern both the cause and conclusion of the disease; and, by considering the quality of the principal aspects in airy, watery, earthy,

or fiery, signs or constellations, all doubts and difficulties are removed; a plain and obvious mode of treatment presents itself to our view; and furnishes a striking proof of the wise œconomy of the Supreme Being, in governing this inferior world by the influence and energy of the superior bodies, whose very *minutiæ*, as well as more magnificent phenomena, are invariably obedient to a regular and unerring law."

But, although the astrologic science be thus useful in guiding our medical enquiries, and necessary in forwarding the cure of remote and latent diseases: yet were the enemies of Culpeper, like many of the present day, exultingly forward to condemn that which they do not understand, and by attempting to baffle the secret operations of nature, and the strong influences of the planetary system—of the *Pleiades*, *Arcturus*, and *Orion*, they expose the weakness of their own imaginations, which they insultingly oppose to *the glorious host of heaven*.

Perfectly indifferent, myself, as to the cavils of dissatisfied critics or to the censure of interested men, I shall revive that simple practice of Culpeper, which spread, through the British realms, the happy art of restoring to pristine vigour—the decaying life and health of mankind. For this purpose, I have incorporated into the present edition of his *PHYSICIAN* and *HERBAL*, every useful part of all his other works; and have added a selection of easy rules, for attaining an intimate acquaintance with all the British herbs and plants; for discovering the real planetary influx; and for gathering them at those particular seasons when they imbibe a double portion of efficacy and virtue.

In gathering herbs for medicinal uses, the planetary hour is certainly of importance, however modern refinement might have exploded the idea. In nature, the simplest remedies are found to produce the most salutary effects; and in earlier times, when the art of medicine was less obscured, and practised more from motives of benevolence, the world was less afflicted

with disease, and the period of human life less contracted. The laboratory of nature, were it but consulted, furnisheth ample remedies for every curable disorder incident to mankind; for, notwithstanding the parade of compound medicines, the art of healing consists not so much in the preparation, as in the due application, of the remedy. Hence it happens that old women, without education or abilities, by the help of a simple herb gathered in the planetary hour, in which hour it imbibes its greatest strength and esculent virtue, will sometimes perform very extraordinary cures, in cases where the regular bred physician is absolutely at a loss how to treat them.

I would not here be understood to cast any unworthy reflections upon those exalted characters, who have made physic, and the alleviation of human infirmity, the principal study of their lives. The many invaluable discoveries lately added to the Pharmacopœia, both from the vegetable and mineral worlds, are strong arguments of the necessity of regular practice and of professional education in forming the Physician. But, were the bulk of these gentlemen to consult a little more the planetary influence, and the effects of Saturn and the moon in each crisis and critical day, and regulate their prescriptions accordingly, I am persuaded more immediate relief would in most cases be afforded to the sick and languishing patient. Surgery too, which, like a guardian angel, steps forward to alleviate the perilous accidents of the unfortunate, would gain much improvement by the like considerations. It is not the humane and liberal professors of physic or surgery, whose practice deserves censure, but that mercenary tribe of pretenders to physic, who now pervade the kingdom, and, like a swarm of locusts from the east, prey upon the vitals of mankind. These monsters in the shape of men, with hearts callous to every sentiment of compassion, have only *fees* in view. Governed by this sordid principle, they sport with life, unmoved amidst the bitter anguish and piercing groans of the tortured patient, whom, when too far gone for human aid to restore, they abandon to despair and death.

To

To prevent, as much as possible, the growth of so enormous a traffic it, requires that the practice of physic, instead of being clothed in a mystic garb, should be put upon a level with the plainest understanding, and the choice and quality of our medicines be rendered as obvious and familiar as our food. Instinct, in the brute species, furnishes this discrimination in the most ample and surprising manner; and, in the primitive ages of the world, when men were *rich in years*, and *blessed with length of days*, it was the custom to consult individually their own complaint, and their own cure. To restore this primitive practice, was the godlike aim of the immortal Culpeper, when he compiled this invaluable Work; for since it was the intention of our beneficent Creator to provide a natural remedy for all our infirmities, so it would be derogatory to his attributes, to suppose the knowledge of them limited to a few, or confined to a small class of his creatures. On the contrary, this knowledge lies open to the wayfaring man---it grows in every field, and meets us in all our paths; and was mercifully given to alleviate the pangs of disease---to eradicate the pestilential seeds of infection---to invigorate the constitution, and to strengthen Nature---eventually reducing the perils to which we are exposed, and making rosy HEALTH the Companion of our lives!

I N T R O D U C T I O N.

SO much has the fashion of the times encreased the use of foreign drugs and nostrums, that it has become a subject of disputation in the schools, Whether medicine be most *beneficial* or *injurious* to mankind. Many there are, who condemn the FACULTY and the PROFESSION, as the greatest enemies of society; and who would sooner part with life and fortune than place themselves in the power of either. Yet the one, when consulted with caution, is the best protector of our lives; and the other, when guided by integrity, is the securest guardian of our liberties. It is not the use but the abuse of them which draws down a curse upon posterity; whilst a seasonable and prudent resort to either is congenial to the blessings of health and freedom.

The laws of physic agreeable to the laws of nature. Physic imitates Nature. Its design is, to preserve the body in health—to defend it from infirmity—to strengthen and invigorate the weak, and to raise the dejected. In a word, the salutary effect of natural medicine keeps the body in a progressive state of health and comfort, until the approach of death—that certain and inevitable consequence of our existence, which no art, nor invention, nor the greatest power of princes, can prevent or resist. Let it then be our wisdom, after attending to our eternal concerns, to be careful in securing the most valuable of our temporal ones, namely, that of HEALTH; for she is the most excellent companion, the richest treasure, and the best of earthly possessions; without which, nothing here can be esteemed a blessing.

Hence it becomes evident that the study of Physic ought to form a part of the education of every private gentleman, and should become the amuse-

ment of every individual whose occupation in life affords an opportunity of investigating this valuable branch of literature. No science presents to our contemplation a more extensive field of important knowledge, or affords more ample entertainment to an inquisitive or philanthropic mind. Anatomy, BOTANY, Chemistry, and the Materia Medica, are branches of natural History, fraught with such amusement and utility, that he who neglects them can have no claim to taste or learning. The vegetable World, with its occult virtues and power, is, of all others, the sublimest subject for the exertion of genius, and affords the highest gratification to a benevolent mind : since there are no infirmities incident to our fallen nature that it does not enable us to alleviate or remove.

It is a melancholy reflection, daily confirmed by observation and experience, that one half of the human species, labouring under bodily infirmity, perish by improper treatment, or mistaken notions of their disease. What greater inducement then can be offered to mankind, to acquire a competent knowledge of the science of physic, than the preservation of their own lives, or that of their offspring ? Not that it is necessary for every man to become a physician ; for such an attempt would be absurd and ridiculous. All I plead for is, that men of sense, of probity and discernment, should be so far acquainted with the theory of physic, as to guard their families against the destructive influence of ignorant or avaricious retailers of medicine. For, in the present state of things, it is much easier to cheat a man out of his life than of a shilling ; at the same time that it is almost impossible either to detect or punish the iniquitous offender.

The benefits resulting from medicine as a trade are principally derived from those unfortunately fanciful and imaginarily disordered patients, whose fortunes are ample, and whose establishments comprise an annual provision for the physician and apothecary. Others again, whose

discernment is less defective, but whose circumstances are sufficient, are equally made the dupes of "*the secrets of trade.*" Disease is prolonged, and nervous complaints brought on, by an excessive or improper use of drugs, given for the purpose of encreasing fees, or multiplying the items of an apothecary's bill. Yet these infatuated patients shut their eyes against the light of reason, and swallow every thing that is administered to them, without daring to ask the necessity of the prescription, or quality of the dose. Implicit faith, which in every thing else is the object of ridicule, is here held sacred, though at the expence of our constitutions. Many of the faculty are no doubt worthy of all the confidence that can be reposed in them; but, as this can never be the character of *every* individual in any profession whatever, it would certainly be for the safety and honour of mankind, to have some check upon the conduct of those to whom we entrust so valuable a treasure as Health.

Persons who move in a middling sphere of life too often become objects of similar imposition. The nature of their avocations, and the attentions requisite for business, beget infirmities, which, though easily removed by change of air and simple regimen, are frequently encreased by irritating drugs, until the constitution receives a shock too violent for medicine to restore. The lower orders of society, however, and particularly the poor, are not exposed to this danger. Their misfortunes arise from an unfeeling inattention and neglect on the part of those who are called to their assistance; but by whom they are frequently left either wholly destitute of advice and of medicines, or are obliged to put up with such as it would be much more prudent to avoid. How extensively advantageous then would medical knowledge prove to men in almost every occupation of life? since it would not only teach them to know and to avoid the dangers peculiar to their respective stations, but would enable them to discern the real enjoyments of life, and be conducive to the true happiness of mankind!

I know

I know there are many humane and well-disposed persons of sense and discernment who possess the disposition and the ability of supplying this defect in medical attention to the poor, did not the dread of doing ill suppress their inclination to do good. Such persons are also deterred from the most noble and praise-worthy actions, by the foolish alarms founded in their ears by a set of men who raise their own importance by magnifying the difficulties of performing cures, who find fault with what is truly commendable, and sneer at every attempt to relieve the afflicted which is not sanctioned by their precise rules. But these gentlemen must excuse me for affirming, that the practice of such charitable persons, a little assisted by medical reading, and directed by the simple dictates of nature, is frequently more successful than the practice of professional men, who are so intent upon *dozing* the patient, that things of greater import are neglected and forgotten.

To assist the well-meant endeavours of the humane and benevolent, in relieving distress, and eradicating disease, is an attempt which I trust will meet the countenance and support of every sober friend to society. I am well aware, that he, who stands forward to promote the public welfare at the expence of a particular profession, must excite enmity, and draw upon him the clamour of interested individuals. But the solid comforts resulting from a sense of doing good, and the reflection of becoming instrumental in preserving the health of thousands, surpass the fleeting praises of the giddy multitude, or the smiles of self-exalted and ambitious men.

CULPEPER's ENGLISH PHYSICIAN,

CONTAINING THE

M E D I C A L P A R T.

A PHYSICAL AND ASTRONOMICAL DESCRIPTION OF MAN.

GOD, the omnipotent and wise Creator, having made all things out of nothing, and from a crude and undigested mass, according to his will, and by his word, brought all things into a decent frame and majestic structure: out of a confused chaos made the heavens and the earth; out of that which was dark and void he created light, he separated the waters from the earth, and gave bounds to the unruly waves; and indued the dry and barren earth with prolific virtue, richly adorning it with grass, herbs, and fruit-trees; he made the sun, moon, and stars, to divide the light from the darkness, to enlighten and rule both day and night, to be for signs, and to distinguish seasons, days, and years; by his word he created every living thing that moveth.

Having thus far proceeded in his so excellent and admirable workmanship of creation, he made MAN a summary of the world's fabric, a small draught of the divine nature: he was made after other creatures, not only as the most perfect, but as the superintendant and master, of all things; created *Quod dominetur in piscis maris, et in volucres cæli, et in pecudes, et in universam terram, atque in omnia reptilia reptantia super terram*: "To rule over the fish in the sea, and over the fowls of the air, and over cattle, and over the earth, and over every creeping thing."

In man he ended his work ; on man he stamped his seal and sign of his power, on him he has imprinted his own image and superscription, his arms and his portraiture. *Dixit Deus, faciamus hominem ad imaginem nostram, secundum similitudinem nostram* : " God said, let us make man in our image, after our likeness." In the creation of man, God seemeth to deliberate and take council with himself, how to epitomize and gather together all his works in so small a compass, to contract his book of creation into so small a volume. He is called the microcosm, or little world, the recapitulation of all things, the ligament of angels and beasts, heavenly and earthly, spiritual and corporeal, the perfection of the whole work, the honour and miracle of nature. He created him naked, being a pure, neat, and delicate, creature, made up of thin, subtile, well-tempered, and seasoned, humours, innocent, and far more beautiful than the rest.

He was created upright, but little touching the earth, quite opposite to the vegetable plant, whose root is therein fixed ; far different also from the beast, who is a mean between a plant and himself, and goeth downward, his two extremes tending to the bounds of the horizon : this upright gait belonging only unto the human species, as the holiest and most divine creature, his head tending to the heavens, on which he looks, and contemplates with grateful adoration the omnipotence of his Creator.

His body being thus formed of pure subtile earth, as a house and habitation for the soul, God breathed in him the breath of life, and he became a living creature ; so, in the ordinary generation and formation, which is made of the seed in the womb, nature observeth the self-same order ; the body is first formed, as well by the elementary force, which is in the seed and the heat of the matrix, as by the celestial influence of the sun ; according to the adage, *sol et homo generant hominem* : " The sun and man do engender man ;" which is done, according to the opinion of the most eminent naturalists and physicians, in such order that the first seven days the seed of the man and the ova of the woman mingle and curdle like cream, which is the beginning of conception ; the second seven days, the seed is changed into a formless bloody substance, and concocted into a thick and undigested mass of flesh, the proper matter of the child ; the next seven days, from this mass is produced and fashioned a gross body, with the three most noble parts, viz. the liver, heart, and brain ; the fourth seven days, or near thirty, the whole body is perfected, jointed, and organized, and is fit to entertain the soul, which invests itself into the body (according to the best authority) about the seven-and-thirtieth or fortieth day : at the third month, or thereabout, the infant hath motion and sense ; and at the ninth month is brought forth. These times cannot be so exactly prefixed, but that by the strength or debility of the seed or matrix it may be either hastened or prolonged. But I shall

not

not enter minutely upon this subject now, but give a more particular description of it hereafter.

The body of man consists of a number of bones and cartilages, which are the basis and upholding pillars of the whole fabric, the joints are compacted with many ligaments, and are covered with innumerable membranes : the members are supplied with above thirty pair of sensitive nerves, as with little cords ; and all filled with as many arteries, like water-pipes, conveying vital spirits to all parts ; the empty places are filled up with above four hundred muscles of different sorts, all covered with a skin.

Man, for whom all things were made, is nourished by the balsamic spirits of vegetables, and therefore doth consist of all these faculties, that spring up as a token of health or sickness. The celestial planets have also great influence over him ; the moistening power of the Moon is represented by the marrow which flows from the brain ; in the genital part is Venus seated ; eloquence and comeliness are the effects of nimble-witted Mercury ; the Sun hath a near affinity to the heart ; benevolent Jupiter hath his seat in the liver, the fountain of nutritive blood ; the fiery fury of Mars is lodged in the gall ; the spongy and hollow melt, the seat and receptacle of melancholic humours, is a perfect representation of the cold planet Saturn. Indeed, the spirits of the body do manifest and hold forth the quintessence of all things. The four humours in man answer to the four elements : as the bile, which is hot and dry, representeth the fire ; hot and moist blood, the air ; phlegm, cold and moist, the water ; cold and dry melancholy, the earth. Man is an admirable creature, the universe and epitome of the world, and the horizon of corporal and incorporeal things. I shall conclude this part with the saying of Zoroastes : “ O man ! the workmanship of most powerful nature, for it is the most artificial master-piece of God’s hands !”

A DESCRIPTION OF THE HEAD.

THE head of man possesses the highest place in the body, and represents the uppermost and angelical region : it is the fort of man’s mind, the seat of reason, the habitation of wisdom, the place of memory, judgment, and cogitation : it containeth the brain, cold and spongy by nature, inclosed with two skins, the one, more hard and thick, joining itself to the *dura mater* ; the other, more thin and easy, wherein lieth the brain inclosed, called *pia mater* ; it is soft and tender to the brain, and nourisheth it, as a loving mother doth her young and tender babe ; from the *pia mater* issue the sinews and marrow that descendeth and falleth down through the *vertebræ* of the back to the reins. In the brain is the seat and throne of the rational soul, in which are a very great number of veins and arteries running through all the substance

substance thereof, administering to the brain both spirit and life, vital and nutritional nourishment, which comes from the heart and liver by very minute or small veins and arteries; and concocted and re-concocted, elaborated, and made very subtil, passing through those woven and interlaced, turning and winding, in which labyrinth the vital spirit, often passing and repassing, is perfected and refined, and becomes animal.

The *pia mater* divides the substance of the brain into three certain cells and divisions, the foremost part of which contains the most, the middle part less, and the hindmost part the least. In the foremost part of the brain *imagination* is seated; in the middle, *judgment*; in the hindmost part, *memory*: imagination is hot and dry in quality, quick and active, from whence it cometh that frantic men, and such as are sick of hot maladies, are excellent in that which belongs to imagination; many, upon such a distemper, have been excellent in poetry and divination; it never sleepeth, but is always working, whether the man be sleeping or waking; and by the vapours that arise from the heart, form variety of cogitations, which, wanting the regulation of judgment, *when man sleepeth* becomes a dream.

Hence it appears that subtilty, promptitude, and that which they commonly call *wit*, belongeth to a hot imagination: it is active, stirring, undertaketh all, and sets all the rest to work; it gathers the kinds of figures of things, both present, by the use of the five senses, and absent, by the common sense.

Judgment is seated in the midst of the brain, there to bear rule over the other faculties; it is the seat of the rational soul, and the judge of men's actions: if you know the mean, whereby it knoweth and judgeth of things, learned authors have been of opinion, that the spirit knoweth by the help of the senses, and that the understanding without the senses is but as white paper. *Nil est in intellectu, quod non fuerit prius in sensu*: "There is nothing in the understanding which was not first in the sense." But this opinion is false, because the seeds of science and virtue are insinuated into our spirits, else is the state of the reasonable soul worse than the vegetative or sensitive, which of themselves are able to exercise their functions. It were absurd to think that so noble and divine a faculty should beg assistance of so vile and corruptible a one as the senses, which apprehend only the simple accidents, not the natures nor essence, of things: and, were it so, it must follow, that they who have their senses most perfect should be most witty, whereas we many times see the contrary. Yet let no one think, that the spirit hath no service from the senses, for in the beginning, or discovery and invention of things, the senses do much service to the spirit, but the spirit dependeth not upon the senses. Some are of opinion, that it is hot and moist in quality, others say, that a dry temperature is proper to the understanding, whereby

whereby it comes to pass that aged persons excel those in understanding that are young, because, as years increase, moisture doth decrease in the brain ; hence it followeth, that melancholic persons, that are afflicted with want, and *fast* much, are *wise* and *ingenious*, for heaviness and fasting are great driers : *Splendor siccus, animus sapientissimus, vexatio dat intellectum* ; “Heat and draught refine the wit, affliction giveth understanding ;” and that is the reason that great persons, who feed high, and take little or no care, that have nothing to vex them, are for the most part *not very wise*.

Beasts that are of a dry temperature, as ants, bees, elephants, &c. are cunning and ingenious ; on the contrary, they that are of a moist constitution are stupid and without spirit. Memory is seated in the hinder cell of the brain, as the grand accountant or register ; some say its temperature is cold and dry, and that is thought to be the reason why melancholic people have good memories ; others are of opinion that it is moist, because children have better memories than old men ; men are more apt for memory in the morning, by reason of the moisture gained by sleep in the night ; but, let it be as it may, it is most certain that those who have a good memory are not in general very wise.

It is true, that many have been excellent in this faculty. Seneca repeated two thousand names as they were first spoken ; he also, hearing two hundred verses, rehearsed them, and began at the last. Cyrus and Scipio knew every soldier's name in their armies. Mithridates learned the languages of two-and-twenty nations. Eldras the priest had the whole Jewish doctrine by heart. Julius Cæsar would dictate to four at the same time ; and, that which is more strange, Pliny would dictate to one, hear another, and read at the same instant. As these were so excellent and acute in memory, others were as dull : Atticus could never learn the letters of the alphabet by heart ; others could not count above four. It is said, that Theodore Beza, two years before he died, as he languished, his mind grew so feeble that he forgot things present, yet he held those things which were printed in his mind before-time, when his understanding and memory were good. What shall we say of Messalla Cornivus, who forgot his own name ? or Franciscus Barbarus, of Athens, a very learned man in the Greek tongue, who, having received a blow on the head with a stone, forgot his learning, which he had spent the greatest part of his life-time upon, yet remembered all things else ? These things are brought to pass either by the strength or debility of men's genitures, and from directions and accidents thence proceeding. Wit and understanding, and all the faculties of the soul, depend on a certain temperament ; and hence it comes to pass that those who are acute and wise in some things are stupid and dull in others.

OF THE INTERIOR PARTS OF THE HEAD.

The sensitive faculty has its residence in the *pia mater*; it is that which gives virtue to all the particular senses, and keeps a harmony amongst them: they are five in number, viz. seeing, hearing, smelling, tasting, and feeling; although these are all united in one in the brain, yet operatively they are distinguished in their several seats and places of residence.

The sight resides in the eyes, and particularly in the chrystalline humour; they are two in number, and collateral, planted in the highest stage, or centinels; they are the luminaries of the *microcosm*; Galen says, the brain and head were made for the eye, that they might be in the highest, as a beholder in a tower; they are next in nature unto the soul; for in the eye is seen and known the disturbances and griefs, gladness and joys, of the soul, as love, wrath, and other passions; they are compounded and made of seven tunics, or coats, and three humours; they proceed out of the substance, they take a panicle to defend it from annoyance. They meet and are united into one sinew, about half an inch in length before they enter the skull, and after divided into two, each goeth into one eye; they are called *nervi optici*, the optic nerves, and through these are brought the *visible spirits* to the eye.

These are the most noble outward parts of the body, in beauty, utility, mobility, and activity. They are to the visage that which the visage is to the body, they are the face of the face, and, because they are tender, delicate, and precious, they are fenced on all sides with skins, lids, brows, and hair. The object of the eye or sight is colour (according to the common opinion), which is an adherent quality in bodies, whereof there are six simples, as white, yellow, red, purple, green, and blue; the compounds are infinite; to speak more fully, the true object is light, which is never without colour, and without which the colours are invisible.

The sense of seeing excelleth all the rest in many things; it apprehendeth farther off, and extendeth itself even to the stars. It is certainly reported, that *Strabo* had such acute eyes, that from *Lilibæum* he could discern ships going forth of the *Carthaginian* haven, and could number them; the distance was one hundred and thirty-five miles. It hath more variety of objects, for to all things, and generally in all, there is a light and colour, the objects of the eyes, as I hinted before. It is most exquisite, for it is most exact, in the least and finest thing that presents itself. It is more prompt and sudden, for it apprehendeth even in a moment, and without motion, when the other senses require motion and time. It enjoyeth a liberty incomparable to others; the eye seeth, or seeth not, and therefore hath lids

to open or shut : it is active ; all the rest purely passive. But that which is most noble in this sense is, that the privation of the object thereof, which is darkness, brings fear, and that naturally, because then a man findeth himself robbed of so excellent a guide ; the sight in the light is instead of company, wherein man much delighteth.

HEARING is the next sense to be considered, whose residence is in the ears ; it is in quality cold and dry, under the dominion of Saturn. They are placed on the outside of the head, in the self-same height as the eyes are, as the scouts of the body, porters of the spirit, the receivers and judges of the sounds, which always ascend. They have their entrance oblique and crooked, that so the sound may not enter all at once, whereby the sense of hearing might be hindered, and not so well able to judge ; and again, that the sounds, being fugitive, might there lurk, and abide under his shadow, till the instruments of hearing have gotten possession thereof. The sinews, that are the organs of hearing, spring each from the brain, and, when they come to the hole of the ear, they are wreathed together ; the end is like a worm, or little teat, into which is received the sound, and from thence carried to the common wits, to distinguish. The object of the ear, or hearing, is a sound or noise proceeding from the encounter of two bodies ; a pleasant and melodious sound sweeteneth and appeaseth the spirit, consequently the body too, and drives maladies from them both ; the sharp and penetrant doth trouble and wound the spirit. This sense hath many singularities ; for the service of the body, the sight is most necessary, but, for the spirit, hearing hath the superiority ; it is spiritual, the agent of understanding ; many that have been blind have been great and wise philosophers, but never any that were deaf. In brief, science, truth, and virtue, have no entrance into the soul but by the ear. Christianity teaches, that faith cometh by hearing, which the sight doth rather hurt than help. Faith is the belief of those things which are not seen, which belief is acquired by hearing. For all these reasons, and many more that might be inserted, the wisest have so much commended hearing, the pure guardian from all corruption, the health of the inward man.

SMELLING is seated in the nose, governed by Mars, and is hot and dry in quality, and therefore martial creatures, or such as are hot and dry of constitution, excel in this faculty, as dogs, &c. From the brain cometh two sinews to the holes of the brain-pan, where beginneth the concavity of the nose, and these two are the proper organs or instruments of smelling ; they have heads like paps, into which is received the virtue of smelling, and presenting it to the common sense. Over these two organs is placed *collatorium*, or the nostrils, which concavity or ditch was made

for

for two causes: First, that the air, that bringeth the spirit of smelling, might rest therein, till it was received by its proper organs. Secondly, that the excrement of the brain might be hidden under it till it be fit to be ejected. From this concavity go two holes into the mouth, of which we may take notice of three conveniencies: first, that when a man's mouth is closed, either by eating or sleeping, air might come through them to the lungs, or he would be forced to keep his mouth open always. Secondly, they are helpful to a man's speech; for, when one or both of those passages are stopped, a man speaketh in the nose, as we commonly say. Thirdly, they are useful in the cleansing the concavities of the nose, either by snuffing, or drawing it through the mouth. The object of smell is an odour, or scent, which is a fume rising from an odoriferous object, ascending through the nose to the ventricles of the brain; the strong and violent hurteth the brain, the temperate and good doth rejoice, delight, and comfort. This sense is oftentimes very useful in discovering meats and drinks of an evil odour, which otherwise would much prejudice the stomach, and work evil effects in the body of the man.

The TASTE is hot and moist, and under the influence of Jupiter: this sense hath its residence in the palate of the mouth and tongue. Its office is to choose what food is congruous to the stomach, and what not. The skin of the palate of the mouth is the same with the inward part of the stomach, and the same with the way of the meat to the stomach; and hence it cometh to pass, that, when a man is touched upon the palate of the mouth, it tickleth the stomach; and, so much the nearer to the throat, so much more the stomach abhorreth. The object of tasting is a flavour or smack, whereof there are six simple kinds, as sweet, sour, sharp, tart, salt, bitter; the compounds are many. And, being led to the mouth, it is not amiss if I speak a few words of the composition thereof. In the mouth are five parts to be considered, the lips, the teeth, the tongue, the uvula, and the palate of the mouth, of which I have already spoken. The lips are made of a muscular flesh: their office is, first, as the door to the house, to keep the mouth close till the meat be chewed; secondly, they help to pronounce the speech. The teeth, the hardest members, are fastened into the mandible: their office is, first, to grind the meat before it goeth into the stomach, that so it may the better digest; secondly, that it might be a help to the speech, for they that want any of their teeth are defective therein. The number is uncertain, some have more, some have less, they who have their full number have thirty-two. The tongue is a carnosus member, compound, and made of many nerves, ligaments, veins, and arteries, ordained principally for three purposes: first, that when a man eateth, the tongue might turn the meat in the mouth till it be chewed; secondly, by the tongue, and the palate of the mouth, near the root of the tongue, is received

ceived the taste of sweet or sour, and thence presented to common senses to pass judgment thereof: thirdly, and principally, the tongue is ordained for the pronunciation of speech, of which faculty I must crave leave to insist on, and that as briefly as may be. Speech is an excellent present, and very necessary, given only unto man, *animi index & speculum*; it is the interpreter and image of the soul; the heart's messenger: the gate through which doth pass all that lieth within the dark and hidden corners of man: by this the spirit becomes visible. Of all the external and visible parts of the body, that which cometh nearest to the heart is the root thereof, and that which cometh nearest the thoughts is speech: "Out of the abundance of the heart the mouth speaketh." It is a powerful master, an imperious commander, it stirreth up, animateth, exasperateth, appeaseth, maketh sad, merry; it imprinteth whatever passion it handleth; feedeth the soul of the hearer; it maketh him blush, wax pale, laugh, cry, tremble, mad with choler, leap for joy, what not? It is the agent of all our concerns; by it we traffic, peace is handled, affairs are managed, it is the band of human society; hearing and speech answer and are accommodated the one to the other; by these two the souls are poured the one into the other; so that, if these two gates be shut (as it is in those that are deaf and dumb), the spirit remaineth solitary and miserable. Hearing is the gate to enter, by it the spirit receiveth all things from without. Speech is the gate to go out, through it the spirit sendeth forth that which was within. From the communication of these two, as from the stroke of two flints, there cometh forth the fire of truth; and so by the polishing and rubbing of these two, knowledge cometh to perfection; but hearing is the first and principal, for there can nothing come forth which did not first enter; and therefore he that is deaf altogether by nature is also dumb.

I might enlarge a great deal more in the description of the head, but, my purpose being to declare nothing but what may be pertinent in the manifestation of the human faculties and virtues, I shall conclude this discourse with a word or two of the sense of FEELING, which is of no particular quality, but of all, hot, cold, dry, and moist: it is deputed to no particular organ, but is spread abroad over the whole body; it is the index of all tangible things, its object then must be heat or cold, drought or moisture, things pleasant and polite, sharp and smarting, motion, rest, tickling. It is known that man and other creatures may live without some particular sense; it is the opinion of most, that a man cannot live without this sense of feeling, being only necessary unto life; yet Augustine proveth the contrary, in the fourteenth book, *De Civitate Dei*, by example of a Presbyter, that lay as though he were dead, and did not feel those that pulled him, nor would he stir though they burned him with fire; yet confessed that he could then hear men speak (if they spoke aloud) as though they

were far from him, by which it appears, that this he did, not by resisting, but for want of the sense of feeling, which afterwards was restored to him again. I shall pass by what the English history relates of one Elizabeth Barton, a maid of Canterbury, who oftentimes was deprived of her senses by reason of a disease she had.

I shall also wave disputes concerning the number of the senses, some supposing there are no more in nature than are apparent in us. There may very well be more, yet greatly to be doubted that there are; it is impossible for us to know them, to affirm them, or to deny them, because a man shall never know the want of that sense which he never had: one sense cannot discover another; and, if a man want one by nature, yet he knows not which way to affirm it. A man that is born blind, and hath not heard what sight is, cannot conceive that he seeth not, nor desire to see. So man, being not able to imagine more than the five that he hath, cannot know how to judge whether there be more in nature: who knoweth whether the difficulties that we find in many of the works of nature, and the effects of many creatures which we cannot understand, do proceed from the want of some sense that we have not? There are hidden properties which we see in many things, and a man may say that there are sensible faculties in nature, proper to judge and apprehend them, yet must conclude we have them not; who knoweth whether it be some particular sense that discovereth the hour of midnight to the cock, and moves him to crow, or how beasts are taught to chuse certain herbs for their cure, and many such-like wonders?

OF THE STOMACH.

THE STOMACH is a member compound and spermatic, sinewy and sensible, wherein is made the first perfect digestion of chyle: it is a necessary member to the body, for, if it fail in its operations, the whole fabric is corrupted. It is in the little world the same as the terrestrial globe is in the great world; in it is expressed the sublunary part of the world; in it are contained the parts that serve for nutrition, concoction, and procreation. And this leads me to discourse of the administering virtues in man, which are here seated, and to wind up all with a touch of the office of the microcosmical stars with as much brevity as may be. The stomach is framed of two panicles, the outer is carnosus, the inner nervous, from which is stretched to the mouth *oesophagus*, or the way of the meat, by which the stomach draweth to itself meat and drink as with hands. By the virtue of the subtle will, which is in this *mucus longitudinalis*, is made the attractive virtue, which is hot and dry, by a quality active, or principal, which appears by the sun, the fountain of all heat, which is of an attractive quality, which is evident by his attracting and exhaling the humidity from

from this inferior globe into the airy region, as into the neck or higher part of an *alembic*; and, being resolved into water, (by reason of their weight,) fall down again upon the earth, which is the vessel receiving: so, through continued distillations, by sublimation of the water, by cohabitation, by drawing off the liquor (being often poured on), and fortified by the influence of the celestial and central sun, the body becomes endued with a concoctive, nutritive, and procreative, virtue. So in the stomach, by the active quality of the microcosmical sun, his benevolent rays, and friendly heat, meat and drink are desired, and attracted into the stomach, for the nourishment of the whole body.

In the stomach is a transverse muscle, to withhold or make retention; by this retentive virtue, those things that are brought into the stomach are kept and withholden until nature hath wrought her end, and every faculty hath executed its office. It is in quality cold and dry; cold, because the nature of cold is to compress or hold together, as you may see in ice; dry, because it is the nature of driness to keep and hold what is compressed. It is under the influence of Saturn, and that is the reason why, for the most part, men that are cold and dry of temperature, or, as astronomers say, Saturnine people, are covetous and tenacious; and that is the reason that old men are naturally covetous, because Saturn ruleth old age, and, by the decay of nature, the temperature becomes cold and dry. It hath the spleen, the representative of Saturn, lying toward the left side, and furnisheth the stomach with humours necessary to fortify the retentive virtue.

The digestive faculty, which is the chief and most principal, (the others like handmaids attending it,) is hot and moist, nature's cook and principal workman, the archæus and central fire which in this philosophical vessel, viz. the stomach, digesteth the victuals into a chaos, or confused mass, that so a natural separation may be made. It is under the influence of Jupiter, who furnisheth it with friendly heat and moisture, by the liver, (the microcosmical Jupiter,) chafing and heating the right side of the stomach.

The stomach hath also a latitudinal muscle, or will, which makes the expulsive faculty; it is naturally cold and moist; cold, to compress the superfluity; moist, to make the matter slippery and fit for ejection, also to work a suitable disposition in the body. It is a necessary operation by it, after the separation of the pure from the impure, the elements from the *caput mortuum*, or rather *fæces*, is removed and carried away, all that is needless or prejudicial to nature. It is under the dominion of the Moon, (with whom you may join Venus, being of the same nature,) whose epitome or microcosmical substitute, viz. the brain, sendeth a branch of nerves to the stomach, and thereby furnisheth it with humours, cold and moist, fit for expulsion.

OF THE HEART.

THE HEART hath two ventricles or concavities, and the left is higher than the right; the cause of its hollownes is to keep the blood for his nourishing, and the air to abate and temper the great heat which is included and shut up in the concavities.

As he is *sol corporis*, and center of the rest of the members and ruler of the family, he communicates to them life and motion, yet by his heat he attracts what is needful for himself from the other members, as a subsidy or tax imposed upon his subjects. And therefore to the right ventricle of the heart cometh a vein from the great vein, which receiveth all the substance of the blood from the liver; this vein passeth to the right ventricle of the heart, and bringeth a great portion of the thickest and purest blood to nourish the heart. The residue that is left of this is made more subtle through the virtue and heat of the heart, and then sent into a concavity or pit, in the midst of the heart, between the two ventricles; therein it is made hot and pure, and from thence it passeth to the left ventricle, and there is engendered in a spirit that is clearer, brighter, and subtiler, than any corporeal or bodily thing which is engendered of the four elements, for it is a mean between the body and the soul; wherefore, of the philosophers, it is likened more to heavenly than earthly things.

From the left ventricle of the heart spring two arteries, the one having but one coat, and therefore is called *arteria venalis*, which carrieth blood from the heart to the lungs, which blood is vaporous and fit for its nourishment, and carrieth back air from the lungs to refresh the heart.

The other artery hath two coats; it is called, *vena arterialis*, or the great artery, of which springeth all the other arteries, that spread to every member of the body, which carry the spirits, which are the treasures of the soul's virtue; thus it passeth till it come to the brain, and be made an animal spirit; at the liver it is made nutritional, and at the testicles generative. Thus by the heart is made a spirit of every kind, and (like the sun in the heavens) by his royal presence he doth confer life and liberty to his suppliants.

The motion of the heart is wonderful; it continues to the utmost period of life, day and night, without a single moment's interruption or intermission; and is performed more than an hundred thousand times every day. Here is, indeed, something like what the mechanists want, under the name of a perpetual motion; and the stupendous wisdom of the Creator is in nothing expressed more gloriously.

OF THE LUNGS, LIVER, &c.

THE LUNGS are made of a substance very soft and spongy; supple to draw and inforce from, like a pair of bellows; they are an instrument of respiration, whereby the heart is refreshed, drawing unto it the blood, the spirits, and the air, and disturbing itself of those fumes and excrements which oppress it. They are naturally cold and dry, accidentally cold and moist; naturally cold and dry, waving about the heart, abating its heat by a refreshing blast; they are accidentally moist, by reason of catarrhs and rheums, which they receive from the brain.

There are three principal parts in the lungs considerable. One is a vein coming from the liver, which bringeth with it the crude and undigested part of the chyle to feed the lungs. Another is *arteria venalis*, coming from the heart, bringing the spirit of life to nourish the lungs. The third is *trachea arteria*, that bringeth air to the lungs, and it passeth through all the left part of them to do its office.

The lungs are divided into five portions or pellicles, three on the right side and two on the left side; that, in case any impediment or hurt should happen in any one part, the other should be ready to supply the office.

But I shall give no further description of the lungs, but describe the liver, which is a principal member in the little world, representing the planet Jupiter, *quasi juvenis pater*, hot and moist, inclining towards the right side, under the short ribs. The form of the liver is gibbous, or buncy, on the back side; on the other side hollow, like the inside of an hand, that it might be pliable to the stomach (as a man's hand is to an apple, or any thing that is round) to further its digestion; for his heat is to the stomach as the heat of a fire is to the pot which hangeth over it. It is the storehouse of the blood, the fountain of the veins, the seat of the natural nourishing faculty, or vegetative soul, engendered of the blood of that chyle which it draweth from the meseraic veins, and receiveth by the *vena porta*, which entereth into the concavities thereof, and afterwards is sent and distributed through the whole body by the help of *vena cava*, which arise from the bunch or branches thereof, which are in great numbers as the rivers from the ocean.

The natural and nutrimental faculty hath its residence in the liver, and is dispersed through the whole body with the veins, from which are bred four particular humours, viz. blood, choler, phlegm, and melancholy.

Blood is made of meat perfectly concocted, in quality hot and moist, Jupiter's darling, the most perfect and necessary humour (the other three being superfluities, yet necessary too). The blood thus concocted is drawn out by the *vena cava*, whose branches, ramifying upwards and downwards, carry and convey it to all the

other members of the body for their nourishment, where, by a third digestion, it is transmuted into the flesh.

Choler, or bile, is made of meat more than perfectly concocted : it is the spume or froth of blood ; it clarifieth all the humours, heats the body, and nourisheth the apprehension. It is in quality hot and dry, it fortifieth the attractive faculty as blood doth the digestive ; it moveth man to activity and valour : it is under the planet Mars, whose residence is in the gall, which is an official member, a purse or panicular vessicle placed in the hollownes of the liver, whose office is to receive the cholerick superfluities, which are engendered in the liver as aforesaid. Which purse, or bag, hath three holes, or necks. By the first it draweth to itself the choler from the liver, that so the blood be not hurt by the bile, or choler. By the second it sendeth choler to the bottom of the stomach, to fortify the attractive faculty. And, lastly, it sendeth choler regularly to every gut, from one gut to another, to cleanse them from superfluities and dross.

Phlegm is made of meat not perfectly digested : it fortifieth the virtue expulsive, and maketh the body fit for ejection ; it is kind to, and fortifieth, the brain by its consimilitude with it ; it is antipathetical to the apprehension, and doth much injure it, therefore phlegmatic persons have but weak apprehensions ; it is cold and moist in quality, its receptacle is in the lungs, it is governed by the Moon and Venus ; therefore it qualifies the bile, cools and moistens the heart, thereby sustaining it and the whole body from the fiery effects which continual motion would produce.

Melancholy is the sediment of blood : it is cold and dry in quality ; it maketh men sober, solid, and staid, fit for study, or any serious employments ; it curbs the unbridled passions incident to the sanguine complexion : it stayeth wandering and idle thoughts, and reduces them home to the centre ; it is like a grave counsellor to the whole body. It is governed by the planet Saturn, it strengtheneth the retentive faculty, and its receptacle is in the spleen ; which in the body is placed on the left side transversely linked to the stomach.

OF THE REINS AND KIDNEYS.

THE REINS and KIDNEYS are placed within the region of the nutrites backwards, and they are ordained to cleanse the blood from the watery superfluities ; they have two passages : by the one is drawn the water from the *venakelis*, by two veins, which are called *venae emulgentes*, the emulgent veins ; and by the other is sent the same water to the bladder, and this is called *poros urithedes*.

The kidneys are made of a hard substance, and full of hard concavities, and therefore the sores of them are hard to cure ; they are harder in substance than any other fleshy

fleshy member, and for that two causes; the first is, that they be not much hurt by the sharpness of the urine; the other is, that the urine that passeth from them might be the better cleansed. The heart sendeth an artery to convey to them blood, heat, spirit, and life. And from the liver there cometh a vein, which bringeth nutrimental blood. Their fatness is as of other members, made of thin blood congealed by cold; there is the greater quantity in this place, because it should temper the heat of the kidneys, which they have from the biting sharpness of the urine.

The next thing is the bladder, which is compounded of two nervous panicles; in complexion it is cold and dry, whose neck is carnosus, and hath two muscles to withhold and to let it go; in man it is long, and is contained with the yard passing through the *peritoneum*; but in women it is shorter, and is contained with the *vulva*: the place of the bladder is between the share-bone and *longaon*. In women it is between the aforesaid bone and the matrix. In the bladder are implanted the uterers, which bring the urine or water from the kidneys thither, and enter into the holes and panicles thereof, which is done by a natural motion between tunicle and tunicle, till the urine findeth the hole of the nether tunicle, where it entereth privily into the concavity. And the more the bladder is filled with urine, the straiter are the panicles compressed together; the holes are not set one against the other, so that, if the bladder be never so full, none can go back again.

This is the microcosmical ocean, into which all the rivers of the body discharge themselves. There must needs be more than a watery substance in it, for many times, in diseases, it is plentifully made, though the patient drinketh little or nothing; and it is observed that creatures that drink nothing will make water. Physicians oftentimes foretel many things by its colour, thinness, and thickness. Salt you know is hid in meats, and that plants have very much salt in them you may find by distilling them; and it is very well known, that by the chymical art many kinds of salt may be fetched out of urine. The artificial *crysocolla* is made of urine. Nitre is made of earth moistened with the urine and dung of living creatures.

OF THE GENERATIVE PARTS.

THE instruments of generation are of two sorts, male and female; their use is the procreation of mankind, the operation is by action and passion, the agent is the seed, the patient the blood. Although this cometh to be spoken of in the last place, yet it might have deservedly been put in the first; for nature regards not only the conservation of itself, but to beget its like and conceive its species. Venus hath the principal government of the members of generation, in which members there are many parts deserving our attention.

First;

First; of the genitals of men:—The first thing to be considered is, that which anatomists call *vasa preparentia*, or preparing vessels, which bring blood and vital spirits to the testicles; they are four in number, and before they come to the testicles they make a curious implication, intertexture, or twisting, the one with the other, the arteries into the veins, and the veins into the arteries, which physicians call *corpus varicosum*; some call it *pompiniformis*: this interweaving reacheth down even into the substance of them; their use is to mix the blood and vital spirit together, that so they may have a fit matter to work on.

The testicles are of a white, soft, and spongy, substance, full of small veins and arteries; or else, when humours flow to them, they could not swell to such a bigness: their form is oval; of their bigness few are ignorant. Each testicle hath a muscle, which the learned call *cremaster*, which serveth to pull them up in the act of generation, as its name in the Greek signifieth, that so the vessels, being slackened, may better avoid the seed.

The seed being thoroughly concocted by the testicles, there are two other small pipes called *vasa deferentia*: they are also called spermatic pores: their office is to carry the seed to the seminary vessels, which are to keep it till need requireth its expulsion. From the stones they arise very near to the preparing vessels into the cavity of the belly; then, going back again, they turn to the back side of the bladder, between it and the right gut, where they are joined to the seminal vessels, which are soft and spongy, somewhat like kernels, through which passeth the *urethra*, or common passage in the yard both for seed and urine.

Histories make mention, and experience evinceth, that some are born without testicles, some with one. Philip, Landgrave of Hesse, had three; he was so full of seed, and prone to venerous actions, that his wife could not suffer him so often as necessity urged him to it, he otherwise being chaste and honest; he, relating his mind to the priests, with the consent of his wife, took a concubine.

It is unnecessary for me here to describe the yard, and all the parts thereof, as their form, office, texture, sympathy, &c. will hereafter be more particularly treated of in the anatomical analysis, in this place therefore I only mean to give a brief touch of the most considerable parts.

I now come to the generative parts of women; and first of the *clitoris*, which is a finewy and hard body, much like the yard of a man, and suffers erection and falling, causeth lust in women, and giveth delight in copulation: Avicenna calleth it the wand, or *albatara*; and Albucasis calleth it *tentigo*; and Fallopius saith, that this hath sometimes grown so big, that women would copulate with others like men. This observe, that the passage of the urine is not through the neck of the womb;

near

near the passage of the urine are four caruncles or fleshy knobs, they are called *myrtiformes*, because they resemble myrtle-berries; the uppermost of them is largest and forked, to receive the neck of the passage of the urine; the others lie below this on the sides, and are to keep back the air or any hurtful thing from the womb. In virgins these knobs are joined together by a thin skin, interlarded with small veins, with a hole in the middle about the bigness of one's little finger, through which passeth the menstruous blood: this skin is a note of virginity, for the first act of copulation breaketh it. I believe that this was that note of virginity which God gave to the Hebrews. These knobs joined together do much resemble a rose not quite blown, therefore called a flower, whence came the word to deflower a virgin. If I should take upon me to declare the opinions of authors, it would prove (almost) an endless task; this I shall add, that I conceive it not a certain note of virginity, because it may be broken without the act of copulation; as, namely, by applying pessaries to provoke the menses, or by a defluxion of sharp humours, &c. but it is probable that the Jewish virgins were more careful of it, their reputations depending thereon.

The womb in figure is almost perfectly round, in virgins about the bigness of a walnut, yet, when a woman is conceived with child, it dilates itself to such a capacity, that it is able to contain the child; the mouth of it is no bigger than to receive the glans of the yard, yet at the delivery makes room for the child to come out, be it ever so big: this made Galen admire, and it may be a great admiration to all, if we consider the wonderful works of God in the creation of man: he who knows himself may know there is an all-powerful God! and therefore it was engraven with letters of gold over the porch of the temple of Apollo, the god (according to the Panims) of knowledge and wisdom, this sentence---*Know thyself*---as a salutation unto all; signifying, that he that would have access unto that divinity, and entrance into that temple, must first know himself.

The womb before conception is small, because the seed, being but little in quantity, might be close embraced and cherished. Women have testicles or stones as men have, but they differ from men's in these particulars: they are within the belly in women, in men without; they are not so smooth in women as in men; they are less than the stones of men; they are not staid by muscles, but by ligaments; as men's are oval, they are flattish; they have but one skin, men's have four, because they are without the body, and exposed to the cold; they are more soft and cold than men's are. But they are ordained both in men and women for the same use, viz. to concoct seed; and, though Aristotle denied seed in women, yet Hippocrates, one of the ancients of physic, was of this judgment; and reason and experience confirm it.

The *vasa preparentia*, the preparing vessels, and *vasa deferentia*, carrying vessels, are of the same nature and office as they are in men; they differ only in this, that they are somewhat shorter, having a shorter way to go, the testicles being within the belly in women: but, lest the shortness of the passage should hinder their operation, God and nature have so provided, that they are more twisted and interwoven than they are in men, that they may the better mingle the blood and vital spirit.

Thus have I given you a short description of man, the master-piece of God's workmanship; and in whom is comprised a small draught of all things in the universe. In man, as in a perspective glass, may our mother-earth with her innumerable offspring be discovered; in him may the unruly and restless waves of the ocean be delineated: nor doth he only epitomize the elemental world, but also the celestial; in him are discovered the prudent, majestic, sumptuous, magnificent, honourable, affable, and humane, solar quality: the unsteadfast, timorous, soon-daunted, oft-changing, and shifting, temper, among men, answers to the various motions of the low and oft-changing Luna. Others in profundity of imagination, reservedness of words, austerity of actions, &c. are a fit portrait of the melancholy planet Saturn. There are yet a few in the world who are faithful lovers of fair dealing, beneficent to all men, doing glorious, honourable, and religious, actions; just, wise, prudent, virtuous, &c. of the temper of benevolent Jupiter. There are (in our apprehensions) too many of the Martial temper, who are valiant lovers of wars, frays, and commotions, subject to no reason, bold, confident, willingly obeying nobody, &c. Nor is Venus excluded those people's affections who love mirth in words and actions, musical, delighting in venery, drinking, and merry-meetings, who trouble not themselves with state-affairs, nor are inquisitive after armies or navies. Nor is Mercury without his party among us, who are subtle and politic, excellent disputants and logicians, sharp-witted, and able to learn any thing, men of unwearied fancies, and fit for any employment, yet unconstant. The planetary influence in the good or ill disposition of the air is lively represented in man. A healthy sanguine constitution, or a delicate compoſure of heat and moisture, answers to a serene and temperate air, with seasonable moistening dews and showers, which are the sweet influence of the Sun, Jupiter, and Venus. The feverish, hot, and parching, distempers of the body, answer to the hot and scorching weather occasioned by the fiery beams of Mars. Nor is the cold, chilly, melancholy, weeping, and lamenting, disposition of many people, less represented by the melancholy, dark, cold, and wet, weather, proceeding from Saturn's influx. The intellectual world hath also in man its portraiture; witness the soaring contemplations of the soul of man, which cannot (like the body) be confined to any place, but in a moment surrounds this terrestrial globe;

globe; nor there content, but as soon mounts itself to the heavens, and searcheth their secret corners; nor there satisfied till he comes to the highest, for by his contemplations (having his original from the uncreated light) he reflects thither, viz. to the divine Majesty of heaven!

ANATOMICAL ANALYSIS OF THE HUMAN FRAME.

OF THE SKIN.

THE SKIN is a membranous covering of the body, simular, spermatic, having blood mixed with it, reddish, white, loose, and the instrument of feeling. It hath cutaneous veins and arteries, as also nerves; from the last of which, it receives its quickness of sense. From the capillary veins and arteries it receives blood for nourishment and vital spirit for quickening. Its temperature is cold and dry, or rather exquisitely temperate, yet so that it may be the judge of feeling. The skin on the top of the head is thickest, that on the sides thin, that on the face and palms of the hands thinner, that on the lips thinnest of all; that on the tops of the fingers is mean, so that the sense of touching may be the more perfect: its texture is slight and very full of small holes or pores, for the insensible transpiration of fumes, vapours, and sweat. It takes its colour from the predominant humour, unless it be such from the birth, as in Æthiopia. It has a double substance: the one is external, called *cuticula*, or the scarf-skin, because it is placed upon the skin, as a cover or defence, every where perforated with pores, without blood and without feeling: its connexion is to the true skin, from whence it has its figure and colour; but, in Black Moors, the *cuticula* being pulled off, the skin itself is white. It has no action, only use, which is to shut the pores of the skin, that the ichorous substance may not issue from the veins and arteries; to defend the skin from immoderate heat or cold; and to make it smooth, beautiful, polished, and even. It is generated of a viscous and oleaginous vapour of the blood. The other is the true skin, of which we have first spoken, which is six times thicker than the scarf-skin; its pores will appear in winter-time, if it be made bare, and exposed to the cold: for where they are, the *cuticula* will appear like a goose skin. The skin receives two cutaneous veins, through the head and neck, from the jugulars: two through the arms, breast, and back, from the axillaries: two through the lower belly, loins, and legs, from the groins, which are conspicuous in women after hard labour, and in such as have the *varices* in many branches. It has few arteries, and those very small, in the temples and forehead, fingers, scrotum, and yard.

OF THE FLESH.

THE FLESH is a similar, soft, thick, substance, well compacted, made of blood alone, if it be red; but, of blood and seed, if it be white. It is four-fold, viz. muscular, viscerous, membranous, and glandulous; of which the two first are very red, but the two latter white. Muscular flesh is soft and red, and that which is properly termed flesh. Viscerous flesh is that of the bowels, which is the proper substance of the lungs, heart, liver, spleen, and kidneys; it is red, hard, fitted to prop up the vessels, and to assist them in their particular and various operations. Membranous flesh is the fleshy substance of every membranous part, as in the gullet, stomach, guts, womb, bladder. Glandulous flesh is the flesh of kernels; it is white, thick, and spongy, formed of seed (and therefore cannot properly be called flesh), of which some anatomists make many diversities; but the true searcher may find that the glandules differ not so much in substance as in their use and humour; which are, first, to support the divisions of the vessels; secondly, to drink up superfluous humours, because they are of a hollow spongy substance, and are therefore vulgarly termed *emunctories*, or cleansers of the noble parts, those in the neck being accounted cleansers of the head, those in the arm-pits of the heart, and those in the groin of the liver; thirdly, to moisten the parts for their more easy motion, or to prohibit driness, such are those which are situated by the tongue, larynx, eye-corners, &c.

OF THE MEMBRANES.

A MEMBRANE is a similar, spermatic, part; broad, soft, dilatable, white, containing and investing the parts, and carrying sense to them. If, being a hollow body, it receives something, as the stomach, bladder, gall, eye, it is called *tunica*, a coat; but, if it embraces and covers a solid body, it is called *membrana*, a covering; and those which cover the brain are called *meninges*. It is indued with sense from itself. Membranes are the only true organs of feeling, serving the animal spirits to this purpose. Its use is, to invest the parts of the body, to defend it from injuries by reason of its hardness and compactness, to give them the sense of feeling, to strengthen them, to join parts to parts, and to keep them united; to separate also the parts, and to close the mouths of the vessels. Some membranes are thin, some thick: the thin membranes also differ; for the *periostion* of the ribs is thinner than the *pleura*; the *periostion* of the head is thinner than the *pericranium*; the *pia mater* is thinner than the *dura mater*. The proper membrane of the muscles

is thin, and is knit unto the muscles by most thin filaments. Its use is to clothe the muscles, and to separate them one from another; and to impart to them sense and feeling. The thick membrane is called by some a membranous muscle, by others a nervy or fatty coat; it is called fleshy, because in some places, as about the loins, neck, ears, forehead, &c. it retains a fleshy substance; but, in the abdomen of a man ripe in years, it has no fleshy appearance at all. Its temperature is hot and moist, having its origin from blood: it is situated under the fat, and stretched out over the whole body universally, and is the fourth covering of the body, (but in beasts it is next to the skin :) it has no figure, but that of the body which it covers: its colour is various in divers places: in the neck, forehead, and privities, it is redder than elsewhere: in some places it is joined to the fat inseparably, in other places it may be separated; and it communicates with the principal parts by the extremities of the veins, arteries, and nerves. It is very sensible, so that the rigour and trembling of the body depends thereupon: its use is to give foundation to the collecting and generating the fat, and to keep the fat in its due place, as also to divide one muscle from another, and all of them from the other flesh; to clothe the body, cherish the internal heat, and to defend it from external injuries: it sticks close to the fat, to the muscles, and to the ligaments of the bones, and is firmly joined to the back in fashion of a membrane, from whence it is said to arise; it is so closely joined to the *musculus latus*, that in the neck and forehead it can scarcely be separated from it, whereby it is thought to constitute the same: to the skin it sticks by very many veins, some few arteries, branches of nerves, and an innumerable quantity of membranous fibres.

OF A FIBRE.

A FIBRE is a similar spermatic part, dispersed through the skin, flesh, and membranes, to make them the more firm, and, being naturally distended, to contract again in the same manner. By reason of the various situation thereof, it is said to be either right, oblique, transverse, or round, whereby it may not only help the membrane, but strengthen it, as also the skin and flesh or muscles; and, when dilated, reduce them to their natural state. Each sort of fibre is said to perform a several action: as, the right to attract or draw to; the oblique to expel or thrust forth; the transverse to retain or hold; and the round to constrain or bind. But these actions of the fibres are not made so much by their own singular virtue as by the virtue of the member which they serve, or belong unto, from which they have their sense and nourishment; for of themselves they are senseless.

OF A LIGAMENT.

A LIGAMENT, or band, is a similar, spermatic, dry, part, adhering firmly to the bones, tying the parts of the body mutually together. Its substance is solid, white, bloodless, softer than a gristle, and harder than nerves and membranes; being of a middle substance between them. It is without cavity, sense, or motion: their substance is in some places softer and more membranous than others, as in all ligaments which go about the joints. Their use is like a cord to connect or bind the parts of the body one to another, chiefly the bones, and to keep them so together, that they may not be luxated or disjoined. As to situation, some are within or among the bones, as the gristly ligaments, which are thick and round: some are externally wound about the bones, which are thin and membranous. As to figure, some are broad, which are called membranous; others round and nervous: but they are called membranous and nervous only in respect to their external form or resemblance, not to their internal essence; for they are all void of sense, which they would not be were they composed of the true substance of a nerve or membrane. All the ligaments are solid, none hollow, except the slender ligaments of the womb.

OF A CARTILAGE, OR GRISTLE.

A GRISTLE is a similar, spermatic, part, drier and harder than a ligament, but moister and softer than a bone, rendering the articulation the more pliable, and defending several parts from external injuries. Some are softer, especially about the joints; others harder, and not much differing from the nature of a bone; and some are in process of time turned into bones, especially in aged people. It is without marrow, cavities, or sense, being endowed neither with nerves nor membranes. Its matter is the same with that of the bones, being a moist earthy part of the seed, partly clammy and gluey, and partly fat, but more viscous than fat: its use is to facilitate motion, that the bones rubbing one against another should not wear and fret; to defend some parts from external injuries, itself being scarcely subject to any: to shape parts prominent or hollow, as in the ears, *larynx*, &c. to fill up hollowness in the joints, as in the knees; to serve for a cover, as in the *epiglottis*; to sustain or underprop somewhat, as the gristles of the eye-lids to bear the hairs; and to make a connection or joining of the bones. Its situation, magnitude, and figure, are various, according to the bones they are joined with: their substance is sometimes harder, as those which in time become boney: sometimes softer, resembling a ligament,

ment, and are therefore called gristly ligaments; yet, though it be hard, it is flexible and tough, because encompassed with viscous slimy matter. As to their connection, some constitute parts in themselves, as that of the nose; others grow to the bones which knit them together, without any other medium, as in the share or breast-bones; or by common ligaments coming between, as in that joining called loose articulation.

OF A TENDON.

A TENDON is a similar, spermatic, solid, part, cold and dry, having a peculiar substance, continued from the beginning to the end of a muscle, and the chiefest part thereof upon which the action of the muscle depends, and no where to be found out of a muscle. It has a nervous-like substance, yet extremely differing from a nerve, white, thick, hard, smooth, and extended according to the length of the muscle, being ten times bigger than a nerve. Its figure is either solid and round, as in the *musculus biceps*; or plain and membranous, as in the muscles of the abdomen, being also either short or long, and of a uniform substance in all its parts; so that, if it is nervous at the beginning, so it is at the end; but sometimes it is nervous at the end, when the head of it is fleshy; and, if its beginning is like small strings, they are united to form the tendon afterwards. The hard and stiff tendons have much fat about them, to soften them, that they may be the more pleasantly moved; and therefore those fibres dispersed among the flesh are nothing else but the tendon divided, and the tendon nothing else but fibres united; and therefore a tendon is either solid, compact, and united, or else disgregated, severed, and divided into fibres. United is, where the whole tendinous part appears white, and hard, either in the beginning, end, or middle, or in all those parts. Severed or divided, when produced into innumerable small fibres, scarce discernible to the sight; being compassed about with flesh.

OF THE FAT.

FAT is a similar, soft, oily, white, insensible, part: made to preserve the natural heat, to help chylication, to facilitate motion, to moisten other parts, and to nourish the body in famine. Its substance is twofold, viz. grease and fuet, which, although it is somewhat solid, yet, is soft and oily, as may be perceived by handling: grease or *axungia* is easily melted, but not so easily congealed: *sebum* or fuet is not so easily melted, but more easily hardened. Its origin is from the thinner parts of the blood, sweating through the veins like dew, and congealing about the flesh: this is the essential matter of fat; its efficient cause is a moist and temperate heat, (which is also the quality thereof;) the cause of its congealing is the coldness of the membranes

membranes from whence it has its white colour: but this coldness is not simple, but respective to other parts. Melted lead or wax will congeal in hot places, if the heat be less than that heat which will melt them: hence Galen determines fat to proceed from coldness, so that the fat, thin, and light, part of the blood, in colder constitutions is reserved; whilst in hotter bodies it turns to nutriment, so that hot and dry bodies are hardly ever fat. Its situation is immediately under the skin, universally over the whole body; the forehead, eye-lids, and privities, excepted: whence it is, that the fatty membrane is as large as the skin, and sticks firmly to it, neither can it be divided from it without scraping; and so also it sticks to the fleshy membrane. It cannot communicate with the principal parts, because it is not truly nourished; nor yet lives, unless by opposition, as stones do, nor is it indeed sensible; therefore it wants both veins, arteries, and nerves, yet all three of them pass through it to the skin. The fat of the belly has three veins, the external mammillary, descending from above: the *vena epigastrica*, arising from beneath, or out of the crural vein, through the groin; and that coming out of the loins having many veins accompanied with arteries: through these, and the vessels of the skin, cupping-glasses, and scarifications, draw humours out of the inward parts. It has a great number of kernels, which receive excrements out of the body into themselves; and they are more numerous in sickly persons, and such as abound with excrementitious moisture. Its uses are to cherish the natural heat; to help the concoction of the stomach; to moisten hot and dry parts, such as the heart; to facilitate motion in the principal parts, as in the gristles and jointings of the greater bones, and about certain ligaments, as also in the socket of the eye, lest by its continual motion it should become dry and withered; to serve as a pillow or bulwark against blows, bruises, and contusions, and therefore the palms of the hands, buttocks, and soles of the feet, have plenty of fat; to nourish the body in time of long fasting; to fill up the empty places in the muscles, and to underprop the vessels, that they may pass safely; and lastly to fill up all the vacuities of the other parts, vessels, and skin, that the body may be rendered smooth, white, soft, fair, and beautiful.

Hitherto we have treated of parts absolutely similar; those which are so only in appearance or to sense are in number five, viz. veins, arteries, nerves, muscles, and bones; of all which we shall now treat in order.

OF VEINS.

A VEIN is a similar, spermatic, membranous, round, long, hollow, part, every where joined by anastomoses to the arteries; allotted to receive and contain the blood from them, to be farther concocted, and to be carried to the heart and liver, and to distribute



The Veins of the Human Body.

distribute it over the whole body. The original of their dispensation, or place from whence they rise, is the liver, where blood is made; and that the first sanguification is made there, and not in the heart, is apparent, because there are no passages to convey the *chylus* to the heart, nor any receptacles for the excrements of the first concoction placed by the heart; all which requisites are found in the liver. Moreover blood is carried from the liver to the heart, but not from the heart to the liver: for it cannot go out of the heart into the liver, because of the valves, though mediately, when it runs back out of the arteries, it may be carried thither. Also the *vena cava* and *porta* enter not into the heart, but the liver; and, in a child in the womb, the navel-vein with blood (which nourishes the child) goes not into the heart, but into the liver; nor is sanguification ever hurt but when the liver is hurt. The veins have only one tunicle, with many valves within, especially in the external joints; they are nourished with blood, not with that contained within themselves, but with that from the little arteries; for their connection is such with the arteries, that every vein is for the most part attended with an artery, over which it lies, and which it touches. Galen saith, a vein is seldom found without arteries: but no artery is ever found without a vein. Their form is that of a conduit pipe; their magnitude according to their place: in the liver, and their original, they are great, because they are hot, soft, and in perpetual motion, and because all the blood in the body passes this way, out of the right into the left ventricle of the heart: in the heart they are great, by reason of its heat, and because it is to furnish the whole body with arterial blood, received in, and sent out, by continual pulsations. The emulgent veins are great, because of the plenty of blood, and serosities, brought back from the kidneys to the *vena cava*: but, where the substance of the part is lasting, and the heat small, the veins are less, as in the brain, bones, &c. and in all parts towards their ends they are very small, and called capillary veins, being divided minutely, sprinkled into, and for the most part confounded with, the flesh; by this way the arterial blood is mediately passed through the porous flesh to the veins; and, by the same way also, blood made of chyle in the liver is infused into the little branches of the *vena cava*. The veins and arteries conspire together, and the veins receive out of the arteries spirit and blood; and this is apparent, because, if the veins be quite emptied, the arteries are empty also: moreover, by a vein opened in the arm or hand, all the blood in the body may be drawn out; also it is necessary in respect of the circular motion of the blood; and in many places it may be demonstrated to the eye-sight, where the conjunctions of the veins with the arteries are visible. The veins are endowed with feeling both from the nerves that are near them, and from their own membrane, which is one only, where they are inserted into some bowel; otherwise they are besides invested with a common membrane, or

some external thick one, borrowed from the neighbouring parts, when either they are suspended and carried a long way without the bowels and muscles; or, when they rest upon hard bodies. This happens in the abdomen to the veins and arteries from the *peritoneum*; and in the chest from the *pleura*. Their use is to receive the blood not sufficiently elaborated from the arteries, and to return it to the liver and heart, there to be more perfectly concocted. For neither is the venal blood, nor do the veins carry any thing useful for nutrition; but they bring back all the blood to the heart, only by circulation, either mediately by the liver, as the mesaraic veins; or immediately, as the *cava*; and that either from the whole body, from the smallest branches to the greatest, by the upper and lower branch, or, from the liver, whether it be there generated, or is derived from the mesaraics and arteries. Hence it appears, that the veins carry and re-carry the blood to the liver; and to this end the valves of the veins do conspire, which are so contrived, that they stand all wide open towards the heart, and afford an easy passage from the smallest veins to the greatest, and from thence to the heart; but, from the heart and great veins being shut, they suffer nothing to go back. The liver sends only to the heart, the heart only to the lungs and all the arteries; seeing therefore the blood is thus sent into all parts, and cannot now be instantly repaired by diet, nor return back to the heart by the mitre-fashioned valves of the *aorta*, nor abide still in the arteries, which are continually moving forward the same; nor lastly, that there can be so much spent by the parts to be nourished: it necessarily follows, that what remains over and above is brought back again to the heart, and enters the veins by circulation. The substance of the veins is membranous, that they may the more easily stretch and shrink in again: they have only one tunicle which is proper to them, which is thin and rare; it is so thin, that through it the blood may be received after the parts are nourished, and so be re-carried to the heart, to be there again perfected. The valves of the veins are little foldings, or gates: they are made of most thin little membranes in the inner cavities of the veins, and certain particles as it were of the coats of the veins: they are situated in the cavities of the veins chiefly of the limbs, viz. of the arms and legs, after the glandules of the arm-holes and groins, beginning presently after the rises of the branches, but not in the rises themselves; nor is there any of them in the external small veins, because they need them not; nor in the jugulars (except two in the inner orifice, looking from above downwards), because the blood doth hardly ascend upwards; nor in the *vena cava*, because the valves in the divarications do sufficiently hinder the regress of the blood: they are also found in the emulgents, and in the branches of the mesentery, looking towards the *vena cava* and *porta*, as also in the milky veins. They all of them look the same way, one after another, towards the heart: and are placed at convenient dis-

tances, as two, three, four, or five, fingers between each, according to the length of the vessel. As to their magnitude, they are greater where the plenty and recourse of the blood is most vehement, being in form like the nail on a man's finger or the horned moon, as the sigma-shaped valves of the heart; and in their substance exceeding thin, but very compact, lest they should break by a strong intercourse of the blood. The uses of the valves are, 1. To strengthen the veins, whereas the arteries are otherwise made strong by the double coats. 2. To stop the too violent motion of the blood, lest it should move violently out of the great veins into the little ones, and tear them. 3. To hinder the blood from regurgitating, or going backwards. Hence the cause of a *varix* is apparent, because thick heavy blood long retained against the valves makes a dilatation; for without the valves the veins would swell uniformly and all of an equal bigness, and not in the manner of *varices*.

The chief veins of the whole body are of three kinds, first, the *vena cava*: secondly the *vena porta*: thirdly, *venae lacteae*: from which several other eminent veins arise, having particular denominations. The *vena cava* or *magna* is so called because of its largeness, being the greatest in the whole body, and the original of all other veins which do not proceed from the *vena porta*. It takes its beginning from the liver, where, having spread many veins through the upper parts thereof, they are about the top collected into one trunk, which is presently divided into two parts, viz. the upper or ascendant trunk, and the lower or descending trunk.

The ascending trunk of the *vena cava*, which is the greater, perforates the *diaphragma* or *midriff*, and is spread through the breast, neck, head, and arms. It is carried undivided as far as the *jugulum*, and has four branches; viz. 1. *Phrenica*, *vena diaphragmatica*; the *midriff* veins, on each side one, which send their branches to the *pericardium* and *diaphragma*. 2. The *vena coronaria*, which is sometimes double, encompassing the basis of the heart, at whose rise a little *valve* is placed to hinder the blood returning to the trunk; and with a continued passage it is joined to the artery, that it may therefrom receive the blood, which is to return to the *cava*. 3. *Azygos sine pari*, the solitary vein, sends chief intercostal branches to the eight lower ribs arising about the fifth *vertebrae* of the breast, from the hinder part of the *vena cava*; then, about the fleshy appendices of the *diaphragma*, it enters the cavity of the *abdomen*, where on the left side it is inserted into the *emulgent* vein; on the right side into the trunk of the *cava*. 4. *Subclavii*, or branches of the *cava* by the channel bones, are divided into two only branches, one on each side; each of which is divided into two others, called the *subclavii* and *axillaris*. From the *subclavii* come forth two several branches, a superior and an inferior. From the superior proceeds, first, the *muscula superior*, spread out into the skin and muscles of the hinder part of the neck: secondly, the *jugular veins*, by the sides of the neck; and they are either external or internal.

internal. The external *jugular* creeps up to the neck, chin, head, and face: under the root of the ear it is divided into internal and external branches: the internal goes to the muscles of the mouth, fauces, hyoides, &c. from this branch spring the veins which are opened under the tongue. The external is propped with kernels, and is divided into two parts: the one is carried to the fore parts of the face, cheeks, and nose; and in the middle of the forehead, being joined with a branch of the other side, it makes the vein of the forehead: the other is carried through the sides, the temples, and the *occiput*. The internal *jugular* is called *apoplectica*, and ascends to the side of *trachea* to which it sends branches: and, going to the basis of the skull in its hinder part, it is divided into two branches: the greater of which is carried backward through the hole of the *os occipitus*, and enters into the cavity of the *dura mater* or thick *meninx* of the brain: the less enters in at the hole or *sinus* of the third and fourth pair, and is carried also to the *dura mater*. From the inferior branch proceed five veins, the *mammaria*, *intercostalis superior*, *mediastina*, *cervicalis*, and *muscula inferior*.

The *vena axillaris*, or arm-vein, when it is come to the arm-pit, is divided into two veins, viz. the *vena cephalica*, or upper branch; and the *vena basilica*, or lower branch, to which is added the *mediana*. The *cephalica*, or head-vein, is carried in the surface of the body between the fleshy membranes and coat of the muscles. The *basilica*, or liver-vein, is placed near a nerve of the third and fourth pair; and therefore surgeons in opening of it ought to be careful, lest they wound it, from whence follow great pain, fever, convulsion, and death. From the *basilica*, or lower branch, arise two veins: first, *thoracica superior*, which goes into the muscles of the chest, and into women's breasts: secondly, *thoracica inferior*, which sometimes grows out of the superior, creeping all over the side of the chest: its branches are joined by *anastomosis* with the branches of the *azygos*, which proceed out of the chest. The *basilica* is divided (under the tendon of the *pectoral* muscle) into three branches: the first goes with the nerve of the arm, the second is divided into an external, which sends veins to the thumb, fore and middle fingers; and an internal, running along the middle bone of the cubit, sending branches along the fingers to the internal muscles of the hand: the third, called *subcutaneus*, at the inner swelling of the arm, is the inner branch of the *cephalica*, which constitutes in part the *median*.

The descending trunk of the *vena cava*, which is smaller and narrower, proceeds undivided as far as the fourth *vertebra* of the loins; and sends forth the four following branches. 1. *Venæ adiposæ*, which furnish the coats of the kidneys, and their fat, the sinister being commonly higher than the dexter. 2. The *emulgens*, or emulgent veins, descending to the kidneys by a short and crooked passage,

passage, bringing back the blood, being purified, from the kidneys to the *vena cava*. 3. The *spermaticæ*, or spermatic veins, the right arising a little below the rise of the *emulgent*; and the left arising from the *emulgent*, seldom from the *cava*, sometimes from both. 5. *Lumbares*, or loin-veins, sometimes two, three, or four, which are carried between the four *vertebræ* of the loins. 6. After these branches the trunk goes towards the *os sacrum*, and at the fourth *vertebræ* of the loins it goes under the *aorta*, and is divided into two branches, called *rami ilii* or *iliaci*, because they go over the *os ilii* and *os pubis*, to the thigh: these *iliac* branches, as soon as they have left the cavity of the belly, are called *vene crurales*, or the leg-veins.

From the *rami ilii* arise two veins: first, *muscula superior*, which sends veins to the *peritoneum*, and muscles of the loins and belly: secondly, *vena sacra*, which is sometimes single, sometimes double, for the marrow of the *os sacrum*. From thence the *ramus iliacus* is forked out on each side into the external greater and internal smaller. From the internal smaller proceed two veins; first, *muscula media* without, which sends veins to the muscles on the outside of the hip, and skin of the buttocks: secondly, *hypogastrica*, which is sometimes double, sending veins to many parts of the *hypogastricum*, as to the bladder and its neck, to the penis or yard, to the muscles of the *intestinum rectum*, whence are the *hemorrhoides externæ*, and to the lower side and neck of the womb, whence are those veins by which the courses flow in maidens and women with child; but, when the courses are naturally voided, they flow from the arteries, as appears from their excellent colour and the common office of the arteries. From the external greater proceed three veins: 1. *Epigastrica*, which send branches to the *peritoneum* and muscles of the *abdomen*; the principal parts ascend under the right muscles to the *mammarie*, with whom they are often joined about the navel. 2. *Pudenda*, which sends to the privities in men and women, and goes across to the middle of the *os pubis*. 3. *Muscula inferior*, which, passing over the hip, serves the muscle and skin of the part; from hence downwards the *iliac* branches, as soon as they have left the belly, are called *crurales*.

The *crural* veins are intervoven with little glandules in the bending of the thigh, and from them proceed six branches. 1. The *ischiæ* or *ischiatica minor*, which is opposite to the *saphæna*, and serves the skin and muscles of the hip. 2. *Ischiæ* or *ischiatica major* sends branches to the hip, and a part to the muscles of the calf, and then divides itself into ten branches, bestowing a couple upon each toe. 3. *Poplitea*, the ham-vein, made of a double *crural* branch, mixed together: it runs straight under the skin behind, through the midst of the bending of the ham to the heel, and sometimes to the skin of the external ancle. 4. *Suralis*, a great vein, and is divided into the external and smaller and internal and greater; and each of them again

into exterior and interior; all which send veins to the muscles of the calves of the legs. Those on the back of the foot, being mixed with the *poplitea*, make the same various texture of veins, which are seen under the skin. 5. *Sepena*, (so termed from its apparency,) or *vena maleoli*, the ancle-vein, is long and large, carried on through the inside of the thigh, between the skin and *membrana carnea*, to the knee; and from thence, by the inner part of the leg, it runs to the inner ancle, and to the upper part of the foot and toes. 6. The *muscula*, a vein arising from the trunk or branch hidden among the muscles: it is double, and remarkable, giving veins to the muscles of the thigh. As to the veins of both arms and legs, it is to be noted; first, that their various branches send diverse twigs outward to the skin, called cutaneous veins: secondly, that even the grand branches are variously distributed in every person, being seldom in one man as they are in another: and that the right arms or legs rarely agree with the left. In opening the veins of the foot, you may indifferently make choice of any, seeing they are all derived from one and the same trunk.

The *vena porta*, or gate-vein, is the next great vein to the *cava*; its prime original is the *vena umbilicalis*, or navel-vein, the first of all the veins arising from feed, and that by which the child is nourished in the womb; afterwards it rises out of the hollow part of the liver, where with many roots it is inserted. The trunk, before it is divided into lower branches, sends two small veins to the gall-bladder, called *venæ cysticæ*; and another vein to the stomach called *gastrica dextra*, which is divided about the lower orifice of the stomach. Afterwards the trunk is divided into two eminent lower branches, viz. the *splenetic*, and the *mesenteric*. *Ramus splenicus* goes into the spleen. Before it is divided, it sends from itself two upper branches to the stomach, first *gastrica sinistra*, or *major*, (the largest of all the stomach veins,) which afterwards constitute the *coronaria*; then it sends lower branches, one to the *omentum* or caul, and one to the *pancreas*. Afterwards the trunk of the *ramus splenicus* is divided into the upper and lower branches: the former produces the *vas breve* and other little branches carried into the spleen: the latter produces, 1. *Gastroepiploica sinistra*, which runs out upon the bottom of the stomach, and gives many branches both to the stomach itself and to the *omentum*. 2. *Vena epiplois*, which runs out upon the same parts; and a multitude of other small branches, which are sent up and down all over the spleen. The *mesenteric* branches of the *vena porta*, called *ramus dexter*, whose principal part goes into the mesentery, sends forth two veins; one to the middle of the *duodenum*, from whence certain capillary twigs go through the *pancreas* and *omentum* upwards; and another to the right side of the stomach and *omentum*. Afterwards the trunk

of

of the *ramus mesentericus* is divided into two parts, the right and the left. The right-hand branch is two-fold; 1. *Gastroepiploica dextra*, which runs to the bottom of the stomach, and joins with the *gastroepiploica sinistra*, sending branches through the *omentum* and stomach. 2. The right *mesenteric* branch itself, which is divided into 14 nameless little branches, and those again into innumerable other little veins, which are called *meseraic veins*, and are dispersed into the *jejunum*, *ileon*, *cæcum*, and part of the *colon*. The left-hand *mesenteric* branch, first, sends, out the *vena hæmorrhoidalis interna*, which diffuses itself through the mesentery, and sends forth branches to the spleen, womb, and *intestinum rectum*, which is the internal *hæmorrhoidal* vein: hence appears a communion between the womb and the *hæmorrhoidal* of the *anus*, and that possibly the courses or terms may be conveyed also this way. Afterwards this left *mesenteric* branch spreads itself abroad into the left and central part of the mesentery, whence comes *vena cæcalis*, which goes to the blind gut; and *ramus mesocolicus*, which from the left side of the stomach goes to the *colon*. *Vena cava* first receives the cruder blood from the arteries, and remits it to the heat: the *vena porta* takes the blood not sufficiently elaborated, from the arteries, and carries it to the liver, for the more perfect concoction and separation of the choler.

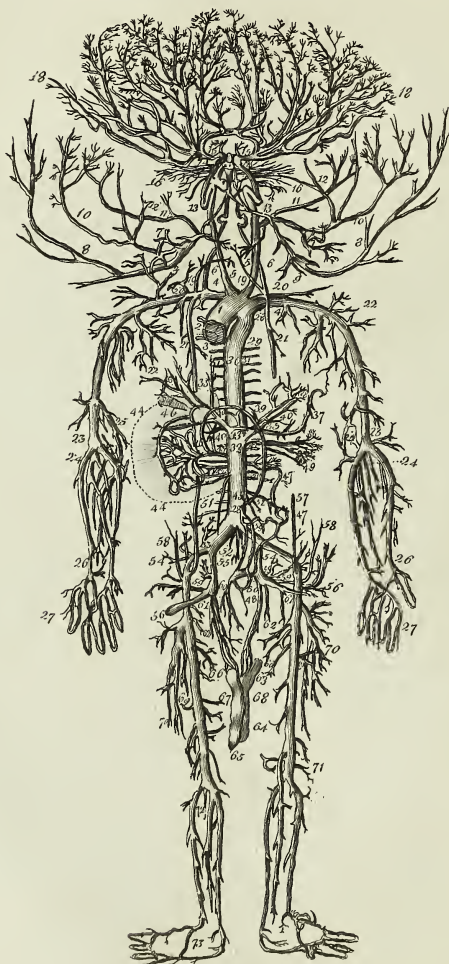
The *hæmorrhoidal veins* are situate in the fundament or *intestinum rectum*, and are of two kinds, either internal or external. The internal proceed from the *vena porta*; the external from the *vena cava*, with which the hæmorrhoidal arteries are associated, and through which the humours to be evacuated are carried off. In their evacuation, the internal have a flux, not very plentiful, attended with a great deal of pain; the external emit a flux so large as may sometimes cause death, or some grievous disease, but without any pain at all. The internal descend alone, not associated with arteries: however the arteries are either hidden, or they depend on arteries not far off: the external descend with arteries to the muscles of the *anus*: and therefore the external hemorrhoids may more properly be called *vasa hæmorrhoidalia*, whereby the arteries are included with the veins.

The *venæ lacteæ*, or milky veins, are peculiar passages, much differing from the *meseraics*: they are called *lacteæ*, from milk which they resemble in whiteness, softness, and fatness. Their situation is in the *abdomen*, where they are for the most part accompanied with fat, to cherish the natural heat for the attraction and concoction of the *chylus*. The great *lacteal vein*, lying between the *arteria aorta* and the *vertebræ* of the loins, covered with fat, runs upwards, and above the heart, ascends by the gullet to the left *subclavian vein*, where it ends in one, two, or three, branches: here a most thin valve occurs at the very end of the vein, looking inwardly,

inwardly, that the chyle might not run back again, or run farther into the arm : out of this *subclavial* they descend by the ascending trunk of the *vena cava* into the right ventricle of the heart, that there, by the help of the heat and the natural faculty, they may be changed into blood. Their substance is the same with that of a vein itself, which it resembles in all things, the milky juice only excepted ; having but a single membrane, though in the mesentery they receive from it another external coat. They grow continually one to another, of an unequal magnitude ; being for the most part small, lest the thick and unprofitable parts of the *chyle* should go into them ; or lest they should make a distribution thereof too suddenly : they are also infinite in number, dispersed through the liver, mesentery, pancreas, and bowels. They are colder and moister than the ordinary veins ; very thin, exceeding subtil, (where they enter into the body of the liver,) tender, smooth outwardly, rare, but rough by reason of their fibres within them. Their action and use are, 1. To carry or convey the *chyle* to the liver. 2. To digest and better concoct the *chyle*, to make it make it more fit to receive the form of blood in the liver : for the *chyle* is not changed at all till it comes into the liver, where it grows red by little and little. 3. To shew a ready way for the distribution of the *chyle* : that the blood is made in the liver, not in the veins ; and that the sucking of the veins is no cause of hunger, because none are carried to the stomach. To shew the causes of some diseases, before obscure ; as, of the *chylous flux* : of *hypochondriac melancholy* : of an *atrophia*, or pining away of the body for want of nourishment, by reason of the glandules of the mesentery being filled with schirrous swellings : of intermitting agues quartered in the *mesenterium*, &c.

The best method of tracing the general course of the veins, is to begin with the main trunks, or primary veins, and end with their ramifications and capillary extremities, according to their several divisions and subdivisions. In this manner they are traced in the annexed plate, where fig. 1 represents the veins as attached to the body ; fig. 2, the veins abstracted from the body ; and fig. 3, the pulmonary vein : of each of which the following is an explanation.

- | | |
|------------------------------|--|
| 1. Vena cava, (fig. 1 and 2) | 10. 10. Auxillary veins |
| 2. Cava descendens | 11. 11. Cephalic veins |
| 3. Cava ascendens | 12. 12. Basilic veins |
| 4. Vena azygos | 13. 13. Vena mediana |
| 5. 5. Subclavian veins | 14. 14. Diaphragmatic, hepatic, and renal or emulgent, veins |
| 6. 6. Jugular veins external | 15. 15. Spermatic and iliac veins |
| 7. 7. Jugular veins internal | 16. 16. Hypogastric, epigastric, and crural, veins. |
| 8. The intercostals | |
| 9. 9. The mammary veins | |



The Arteries of the Human Body

Fig. 3. represents the pulmonary vein in the time of expiration; *a* being its trunk, cut close to the base of the heart; *b, b*, its divisions to the right and left lobe of the lungs; *c*, the canalis arteriosus; *d, d*, the extremities of the arteries freed from the vessels of the lungs, and their inosculations with the pulmonary veins.

OF THE ARTERIES.

AN ARTERY is a similar, spermatic, membranous, long, round, hollow, part, a common pipe-like organ, consisting of a double coat proceeding from the heart, joined every where to the veins, by the assistance of many osculations, containing and carrying the nutritious blood and vital spirits to all parts of the body. It is called *arteria*, from its containing and preserving air or spirit, and therefore the ancients, as, Hippocrates, Plato, and Aristotle, call the wind-pipe *arteria magna*: but Galen makes a distinction, and calls the wind-pipe *aspera arteria*, the rough artery, and those of which we here speak *arteriæ leves*, the smooth arteries, which Aristotle calls sometimes *venam aortam*, and sometimes simply *aorta*. Their matter is a cold clammy part of the seed: the original of their dispensation is the heart, and they proceed out of the left ventricle thereof, and not the middle (as Aristotle would have it); and therefore the *aorta*, or *arteria magna*, proceeds particularly from the left ventricle: but the *pulmoniac arteria* (falsely called by the ancients *vena arteriosa*) from the right ventricle. Their use is, first, to carry the vital blood and spirits, made in the heart, to all parts of the body: secondly, to breed animal spirits in the noble ventricle of the marrow, (to wit) the brain: thirdly, for the nourishment of the body, and all its parts, which are only nourished by the arterial blood, and not by the venal: fourthly, to carry the excrements of the body and blood, either to the outward parts of the body, or to the kidneys, or mesentery or womb, or hæmorrhoidal veins, &c. The arteries flow only by pulsation: whereby, first, the heat of the parts is cooled and tempered: secondly, the nourishing arterial blood is cast continually into the smallest and most remote arteries: which is proved by the continual pulsation of the heart, which drives the blood into the greater arteries: thirdly, the stagnation of the venal blood is hereby prevented: for the pulsation keeps it always in motion, by forcibly casting the more than necessary arterial blood for nourishment into the veins, which convey it to the heart for supply, lest it should be destitute of its sanguine humour by its continual expulsion. The cause of the pulsation, or pulse, is, according to Bartholine, from both the blood filling, and the faculty of the arteries directing. But I judge the cause to be from spirit, wind, air, or breath: for, if you blow with a reed or pipe being put into

water, it will make an apparent pulsation or bubbling, much more if the water was contained in long narrow vessels with valves, that it might not return back; but, if you suck with the pipe, then it runs smoothly, without pulsation or leaping: therefore the blood in the arteries flows with pulsation, from the expulsive faculty of the heart, caused by its spirits; but it flows in the veins smoothly, or without pulsation, because it is sucked or drawn back again by the attractive faculty, caused by want of spirits, or blood, or their being wasted by the heart's perpetual expulsion. The situation of the arteries is deep, always under the veins both in the external and internal parts, the abdomen, a little below the kidneys, only excepted; for, after that the *vena cava* and *aorta* descending from the *diaphragma* have passed the region of the kidneys, the *cava* hides itself under the *aorta*, through all that region, till they pass out of the abdomen; and then the artery again hides itself under the *cava*. The magnitude of the *aorta* is very great, but the descendant part is greater than the ascendant, because the number of the internal parts is greater than of the external. The number of the arteries is less than of the veins, because the passage of the blood is quick through the arteries, but slow through the veins; but there are more arteries than we can well discern, because the capillary arteries are very much like the veins. Their substance is membranous, so that they can be both distended and contracted more than the veins; and it consists of two peculiar tunics; the exterior is thin, soft, and rare, like the tunic of a vein; the interior is compact, hard, and very thick, five times thicker than the tunic of the veins; that thereby the arteries may be strong to endure their perpetual motion, and to keep in their thin and spirituous blood, which would soon vanish and fly away.

The *arteria magna*, or *aorta*, the great and chiefest artery, comes from the left ventricle of the heart, with a wide orifice; it has a double tunic, the innermost of which is five times thicker, left, by continual pulsation about the hard and solid parts, it might incur an incurable rupture. From the ventricle of the heart, before it perforates the *pericardium*, it sends forth to the heart itself the coronary artery, which compasses the basis of the heart, sometimes single, sometimes double. Afterwards, coming through the *pericardium*, or heart-bag, it is divided into two trunks, the smaller ascending, and the greater descending.

The smaller or ascending trunk of the *aorta*, or *arteria magna*, resting upon the wind-pipe, provides for all the parts about the heart, and is divided into two *sub-clavial* branches, the latter rising lower, and going more obliquely to the arm; the other, before they go out of the *thorax*, (for afterwards they are called *axillares*,) produce the *intercostales superiores*, proper to three or four upper ribs: from their upper part arise four arteries: 1. *mammariæ*, which go to the paps; 2. *cervicales*, which

which go to the muscles of the neck; 3. *arteria musculæ*, which are approximate to the jugular veins; 4. the *carotides*, or sleep-arteries, which are two, unequal, and ascend upwards to the head by the sides of the wind-pipe, being knit to the internal jugulars: when they come to the *fauces*, before they enter the scull, they give branches to the *larynx* and tongue, and then they divide themselves into the *carotis externa* and *carotis interna*. The *carotis externa*, being the smaller, furnishes the cheeks and muscles of the face: at the root of the ears it is divided into two branches; the first is sent to the hinder part of the ear, whence arise two other branches, which go to the lower jaw, and the root of all the lower teeth: the second goes to the temples, the forehead, and muscles of the face. The *carotis interna* at the saddle of the *os sphenoides*, under the *dura mater*, makes the *retia mirabilia*, then passes through the *dura mater*, and sends forth two branches: the first, which is the smaller, goes with the optic nerve to the eyes: the second, which is the greater, ascends to the side of the *glandula pituitaria*, and is distributed through the *pia mater* and the substance of the brain.

When the *subclavian branches* have left the breast or *thorax*, they are called *axillares*, and carry nourishment to the outward part of the breast, and to the whole arm. From the *axillares* arise the *thoracica superior*, or upper breast-artery; *thoracica inferior*, or lower breast-artery; the *scapularis*, or shoulder-blade artery. From the upper part of the same axillaries arises the *humeraria*: the remainder goes from the axillary on each side to the arm; where it is carried along through the arm, descending between the muscle, with a vein and nerve of the arm. Under the bending of the elbow, it is divided into two branches, the upper and the lower, which accompany the branches of the *vena cava*, and are called by the same names. The upper goes right forwards through the middle to the wrist, where the pulse is commonly felt: from thence, proceeding under the ring-shaped ligament, it bestows branches upon the thumb, fore-finger, and middle-finger. The lower branch runs through the *ulna* to the wrists, and sends twigs to the ring or little fingers, and so proceeds to the wrist beneath, where the pulse may also be felt, especially in such as are lean, and have a strong pulse; but the beating of the pulse is much better felt in the upper branch, that being less covered or hid by the tendons.

The descending trunk of the *aorta* sends out branches from itself unto the thorax, abdomen, and thighs. From the thorax it sends forth two arteries: 1. the *intercostales inferiores*, which runs to the intervals of the eight lower ribs, and the neighbouring muscles: 2. the *phrenica*, which sends to the *diaphragma* or midriff, and *pericardium* or heart-bag. The rest of the trunk pierces through the cleft of the

septum,

septum, and sends ramifications through the abdomen; some of which go along with branches of the *vena porta*; others the branches of the *vena cava*.

Afterwards the *arteria magna*, or *aorta*, hastens the beginning of the *os sacrum*, where it goes above the *vena cava*, and no longer under, left, by reason of its continual motion, it should be hurt against some bone; and here it is called the iliac artery. It is divided like the *vena cava* into two iliac trunks, and each trunk into an inner and less branch, and into an outward and greater, which go to the thigh. These trunks send out on each side six branches: 1. the *sacra*, immediately after the bipartition: 2. *muscula inferior*: 3. *hypogastrica*: 4. *umbilicalis*: which last three come from the inner trunk: 5. *epigastrica*: 6. *pudenda*: which two last come from the exterior trunk.

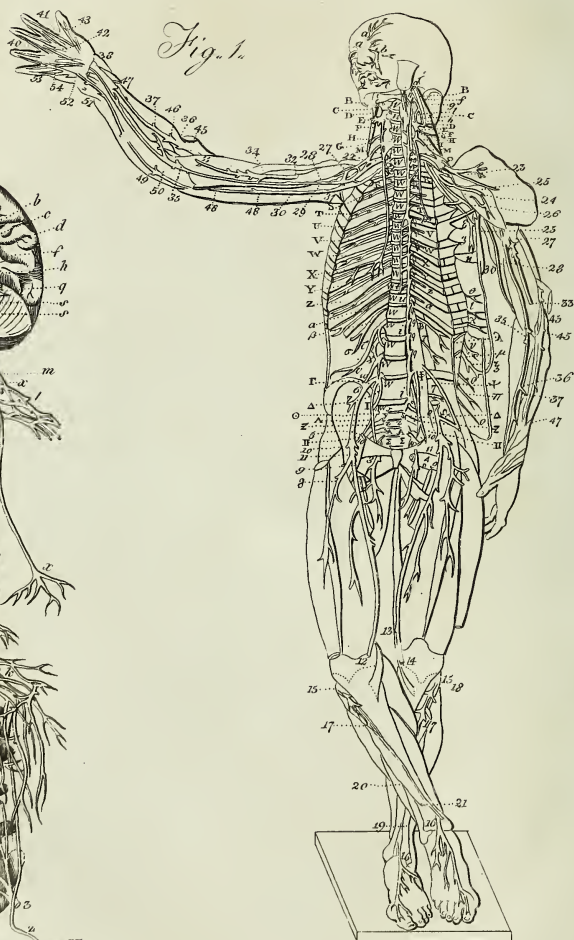
The rest of the artery (out of the abdomen), being carried to the thigh, changes its name, and there makes the crural arteries; from whence on each side spring branches above and under the ham. Above the ham, from the outward part of the trunk: 1. *muscula cruralis externa*, to the foremost muscles of the thighs, from the inner: 2. *muscula cruralis interna*, which go to the inner muscles of the thigh; and this is mixed at the knee with a little twig of the *hypogastrica*. Under the ham arise, 1. *popliteus*, which goes to the hinder muscle of the thigh: 2. *furalis*, which is divided into, first, *tibicus exterior*; second, *posterior altus*; third, *posterior humilis*, for the muscles of the leg: 3. the last of them is sent to the foot and toes, all along accompanied with the veins, from which they borrow their names. To enter into a more minute detail of their subdivisions would be useless; the arteries being all delineated on the annexed plate, with references to their several names, as follows:

1. Aorta, cut from its origin at the left ventricle of the heart.
2. 2. Trunks of the coronal arteries.
3. The three femilunar valves.
4. 4. Subclavian arteries.
5. 5. Carotid arteries.
6. 6. Vertebral arteries.
7. 7. Arteries of the tongue, &c.
8. 8. Temporal arteries.
11. 11. Occipital arteries.
13. 13. Contortions of the carotides.
15. 15. Ophthalmic arteries.
16. 16. Arteries of the cerebellum.
18. 18. Ramifications of the arteries within the skull.
19. 19. Arteries of the larynx.
21. 21. Mammary arteries.
23. 24. 25. 26. Arteries of the arm.
27. Arteries of the hand and fingers.
28. 28. Descending trunk of the aorta.
29. Bronchial artery.
31. 31. Intercostal arteries.
32. Trunk of the coeliac artery.
33. 33. 33. Hepatic arteries.
34. Arteria cystica.
35. 36. 37. 38. 39. Arteries of the stomach, pylorus, and epiplois.
40. 40. Phrenic arteries.
41. Trunk of the splenic artery.
43. 44. 45. 46. 47. Mesenteric arteries.
49. 49. Emulgent arteries.
51. 51. Spermatic arteries.
52. Arteria sacra.
53. 53. Iliac arteries.
54. 54. 58. 58. Iliaci externi.
55. 55.

Fig. 2.



Fig. 1.



The Nerves of the Human Body

59. 59. Iliaci interni. 56. 56. Umbilical arteries. 57. 57. Epigastric arteries. 60. 62. Arteries of the penis and pudendum. 61. 61. Arteries of the bladder. 69. 69. 70. 70. Crural arteries. 72. Arteries of the leg. 73. Arteries of the foot.

OF THE NERVES.

A NERVE or sinew is a similar, spermatic, membranous, long, and white, hollow part: a common organ, serving to carry the animal spirits into all parts of the body for sense and motion. Its efficient cause is the *vis nervifica*, the nerve-making power or faculty: its matter is a cold and clammy part of the seed. Their original dispensation is from the *medulla oblongata*, partly as it is within the skull, and partly as it is in the back-bone. Their end and use is to carry the animal faculty with the animal spirits from the brain, for the sense and motion of the whole body. And therefore the nerves inserted into the parts, give either sense alone, or both sense and motion, there being neither without help of a nerve; for, a nerve being cut, the sense and motion of the part is lost. But this sense or motion is according to the parts where they are disseminated, because the nerves of themselves are neither sensitive or motive: if they are inserted into muscles, (the organs of motion,) they are termed *nervi motorii*, motive nerves: if into the instrument of sense, *nervi sentientia*, the sensitive. Their situation is for security, deeper than that of an artery: their magnitude is various, according to the nature of the organ, and dignity of the action. Those of the eyes are great, because of the action; those of the limbs, very great and thick, because of their distance and magnitude; those of the sensory parts are in a middle proportion; those of the nearest parts, as in the muscles of the face, are the smallest of all. The number of the nerves are taken from their conjugations or pairs, and are so called, from their coupling or being double, for that they sprout out on both sides, except the last or lowest, proceeding from the spinal marrow. The form or figure of the nerve is long, round, and smooth, like conduit pipes: solid to appearance, having no such hollowness as the veins and arteries have; but they have cavities or pores, for the carrying off the animal spirits, though not perceptible to the eyes. The substance of all the nerves is composed of many nervous fibres, which grow mutually together by little membranes; and this substance is thought to be three-fold: 1. the internal white and marrowish, from the marrow of the brain, but more compact and thickened: 2. an inner coat, from the *pia mater*; 3. an outward coat, from the *dura mater*; but these things sense cannot discover. The substance of the nerves are also either harder or softer: the harder are such as either go a great way, or through some hard body, or by a crooked way, or are ordained for motion, which requires strength;

and all parts which have voluntary motion have hard nerves, for that which is hard is fitted to act, that which is soft to suffer: the softer nerves are such as are the shortest, and which belong to the organs of the senses, as the seeing, tasting, hearing, and smelling, which last are the softest of all; and these require soft nerves, as being the objects of suffering. As their use is to carry the animal spirits and faculties into all parts for sense and motion; so, if they be obstructed in their original, or beginning, or totally, they both perish, and an apoplexy is caused: if the obstruction be but in part, then one part is deprived of sense and motion: if they are cut asunder, the motion of the part into which they are inserted is lost: moreover, the nerves diffuse animal light into the parts, by which they are directed in their operations. Hence it appears how necessary it is for a physician to know the nerves, their original, differences, and distribution, that he may understand to what part of the *spina dorsæ* topic medicaments are to be applied, when sense or motion is hurt in the face, neck, arms, hands, muscles of the belly, womb, bladder, anus, yard, thighs, legs, or feet. Moreover the cause of the gout seems chiefly to be the extravasating of the nervous juice; for the nervous juice, being over-heated or rarified by too much heat, cannot be contained in its proper place; but seeking more room flies out of the solid capacity of the nerve (its proper domicil) into the hollow of the nerve, the channel of the animal spirits, thereby interfering with them, causing an extension of the nerve, opposition, and consequently pain. In the annexed plate all the nerves are delineated, agreeable to the following description and arrangement.

The nerves of the brain are nine pair. 1. The olfactory pair, (fig. 2.) *a a*, which, passing through the os cribrosum, are spread over the membrane of the nostrils. 2. The optic pair, *b b*, which by their expansion form the retina of the eye. 3. The motary pair of the eyes, *c c*, each of which is divided, near the orbit, into six parts, or branches; of which, in human subjects, the first branch goes to the elevator palpebræ; the second, to the elevator of the eye; the third, to the depressor; the fourth, to the adducent; the fifth to the inferior oblique muscle; and the sixth into the tunics of the eye; but, in other animals, they are divided much otherwise. 4. The pathetic pair, *d d*, which are very small, and run to the trochlear muscle of the eye. 5. The gustatory pair, which are very large, and divided within the cranium into three branches, *f f*, immediately under the dura mater: of these the first branch, called the ophthalmic, runs to various parts of and about the eye, the eyelids, the muscles of the forehead and nose, and the integuments of the face. The second branch may be called the superior maxillary one, as being finally distributed through all parts of the upper jaw, the lips, nose, palate, uvula, gums, teeth: a branch

branch of it also runs to the ear, and, joining with a branch of the seventh pair, forms the chorda tympani. The third branch may be called the maxillaris inferior, as being distributed over the several parts of the lower jaw, the tongue, and other parts of the mouth; whence the whole pair of nerves has obtained the name of *par gustatorium*; though a great part of them serves to very different purposes, and is carried to parts that have nothing to do with tasting. 6. The abducent pair, *g g*, except a branch for the formation of the intercostal nerve, is wholly carried to the abducent muscle of the eye; whence its name. The intercostal nerve (fig. 1 and 2) *iii, ll, m, &c.* is formed either of ramifications of the two preceding nerves, or only of those of the sixth pair. It makes its way out of the cranium by the passage of the internal carotid, and descends near the eighth pair through the neck; and thence through the breast and abdomen, even to the pelvis; and, in its way, makes various plexuses and ganglia, and sends branches to almost all the parts contained in the breast and abdomen. 7. The auditory pair, *b b*, arise with two trunks; the one of which is called the portio dura, or hard portion; the other the portio mollis, or soft portion. This last enters the foramen of the os petrosum, and thence through various little apertures gets into the labyrinth of the ear, where it is expanded over all its parts, and constitutes the primary organ of hearing. The harder portion, passing the aquæduct of Fallopius, sends back one branch into the cavity of the cranium; it also sends off another branch, which helps to form the *chorda tympani*; and others to the muscles of the tympanum. The rest of this pair goes to the external ear; the pericranium, the muscles of the os hyoides, the lips, the eye-lids, and the parotids. 8. The par vagum, *k k k*, with the *accessorius* of Willis, pass out near the lateral sinuses of the dura mater; and, descending through the neck and thorax to the abdomen, send out branches by the way to the larynx, the pharynx, the heart, the lungs, and especially to the stomach. It also sends off from the upper part of the thorax large branches, which are variously implicated in the neck, thorax, and abdomen, with the linguals, the cervicals, and the intercostals. 9. The lingual pair go immediately to the tongue, and are called by some the motory nerves of the tongue; but, by others, with more justice, the gustatory nerves.

We are to observe, says Heister, that the pair of nerves, which the generality of writers have called the tenth pair of the head, are, for many unanswerable reasons, to be properly called the first pair of nerves of the neck. Of the nerves which arise from the spinal marrow there are properly thirty-two pair. Those of the neck are no less than eight pair; and from them there are innumerable branches distributed through the muscles of the head, the neck, the scapula, and the humerus,

merus, marked A, B, C, D, &c. to O O, the eighth and last pair : from the third, fourth, and fifth, pair, are formed the nerves of the diaphragm; and the sixth, seventh, and eighth, pair, together with P P, the first pair of the back, form the six robust nerves of the arm and hands. To this division is the accessory spinal nerve of Willis to be referred, which arises about the origin of the third or fourth pair.

The nerves of the back are twelve pair, marked P P, Q Q, R, S, &c. to Z, and α, β , &c. which, besides the branch they give to the brachial nerves, run entirely in the same furrow along the course of the ribs, and are dispersed over the pleura, the intercostal, pectoral, and abdominal, muscles, the breast, and other parts of the thorax.

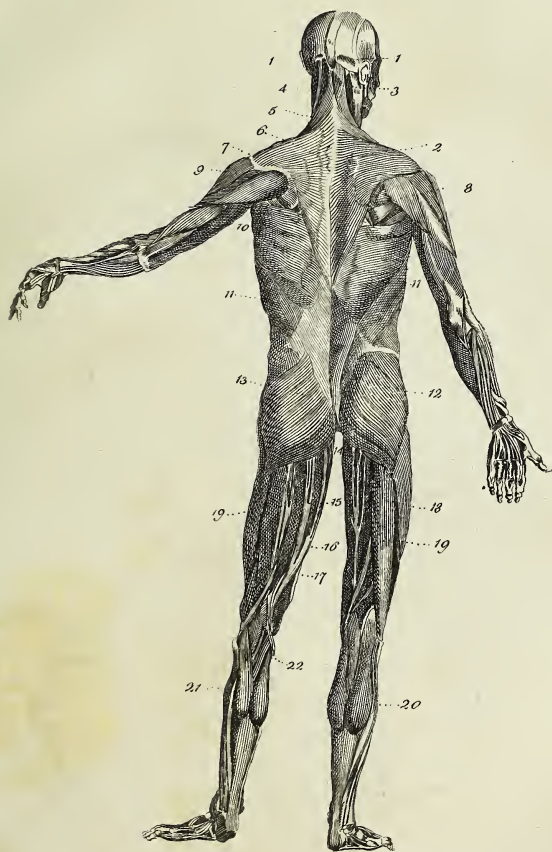
The nerves of the loins are five pair, marked $\tau, \varphi, \omega, \Gamma, \Theta$; with their branches, ν, ν, ψ , &c. These are in general dispersed over the loins, the peritonæum, and the integuments and muscles of the abdomen: and, besides this, their first pair often gives, on each side, a branch to the diaphragm. The second pair, after inosculating with the branches of the first, third, and fourth, pair, forms the crural nerves, 6 6, 7 7, 8 8, &c. which are distributed over the anterior part of the thigh: and, in the same manner, a branch is formed of the conjunctions of the second, third, and fourth, pair, which passeth through the great foramen of the os pubis to the scrotum, the testicles, and the adjoining parts. The fourth and fifth pair of the nerves of the loins, joining with the first, second, third, and fourth, pair of the os sacrum, compose the nerve called ischiatic, which is the largest in the body, being marked 3 3, in fig. 2. it descends along the hinder part of the thigh, and its branches are distributed over the whole leg, the foot, and toes; being marked 15, 17, 18, &c.

The nerves of the sacrum form five or six pair, though not always determinately and regularly so: they pass through the foramina of this bone, and the superior ones of them, as already observed, compose the ischiatic nerve; and what remains is dispersed, in a multitude of ramifications, over the parts contained in the pelvis, the intestinum rectum, the bladder, the parts of generation, and the parts adjacent. They are marked, in the figure, $\Lambda, \Xi, \Pi, \Sigma$, &c.

We shall only add, that 1, 1, fig. 2. represent the brachial nerves; 2, 2, &c. the communications of the vertebral nerves with the intercostals; //, remarkable communications between the phrenic nerves and the intercostals; t, u, u , &c. the accessory nerve of the eighth pair; x, x , the phrenic nerves; and z, z , the nerves which go to the testes, uterus, &c.

OF THE MUSCLES.

A MUSCLE is a similar, spermatic, sanguinous, membranous, fleshy, fibrous, part, and the instrument of voluntary or free motion. It is composed of fibres, for the intention of the motion; of flesh, for the substance; of tendons, which perform
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The Muscles of the Human Body.

Plate 2.

the action; of arteries, by which it is nourished; of veins, which carry back the superfluous nourishment; of nerves, which give sense, and convey the motive faculty to the brain; of membranes, which encompass and keep the muscles together; of fat, which moistens them, and keeps them from being dried by too much motion. The fibres and flesh are only extended according to the straight position of the fibres; the tendon is in the beginning and end; the arteries and veins run through the substance of the muscle; the nerve, as soon as it is entered into the substance, is dispersed into a great number of twigs, which end in it, and become inconspicuous; the membrane is proper to the muscle only, and springs either from the tendons, or is framed by nature in the first conformation of the parts; the fat lies in void spaces to prevent a vacuum or emptiness. The action of a muscle is voluntary or free motion. This action or motion is three-fold: first, when the muscle is contracted towards its head within itself, thereby relaxing the opposite muscle: secondly, when the motion is tonic, so that being contracted it remains so; these two motions are primary, *per se*, and not accidental: thirdly, when (after contraction) it is relaxed, or restored to its former position, which motion is accidental, and proceeds from another; and therefore muscles are always placed one against another as antagonists. The manner of this action or motion varies according to the variety of parts; for, in the throat, it is swallowing; in the arm, bending and stretching forth; in the anus, expulsion and retention; &c. This motion is voluntary or free; for we can hasten or slacken, make or stop, this motion, as we please: but there are some singular muscles, as of the inside of the ear, the midriff, the muscles of the chest, and of the eye-lids, whose motion is partly voluntary, partly natural, because they often perform their actions when we have no thought or will thereto. Those muscles which only perform continual or strong motions, which are all such as are appointed for moving the bones, have tendons; but those which move other parts, as the tongue, lips, forehead, face, bladder, anus, &c. seldom have any; for the muscles move themselves only, as those of the anus and bladder: or they move with themselves and the skin also, as in the lips, forehead, and face: or they move a bone, and such, by reason of the strong motion, require tendons. The diversity of this motion comes from the diversity of the situation: so a straight muscle has a straight motion; a transverse, a transverse motion; an oblique, an oblique motion; and that which compasses a part has an orbicular motion, as the sphincters. The efficient cause of these actions, or motions, is the soul of the creature, inclined thereto by the appetite or will: now the soul uses three instruments to perform the action: first, the brain, to receive the charge; secondly, the nerve, to carry it to the muscle; thirdly, the muscle, to perform the

action itself. The differences of muscles are various: first, from their substance; some are fleshy, as several of the tongue and larynx; some membranous, as the constrictores of the nose; some partly fleshy, partly nervous, as the temporal muscles: secondly, from their quantity; the greatest of all is the first of those which extend over the breast; for it ascends from the end of the os sacrum, to the first vertebra of the thorax: the least of all is the internal muscle of the ear: thirdly, from their situation: fourthly, from their figure, or form, or number, as the muscle deltoides; the muscle bicipites, having two heads; also some have two tails: fifthly, from their beginnings; some proceed from bones, some from cartilages, as those of the larynx; some from tendons, as the lumbricales: sixthly, from the action; some move by sympathy, as the *fraterni*, or *congeneres*; or by antipathy, as the *antagonistæ*; some move themselves only, as the sphincters; some move other parts; some have only one motion, as most of the muscles; some have more than one, as the masseter and trapezius; some are *flexores*, some *extensores*, some *rotatores*, some *supinatores*. As to its being a similar part, it is only said to be so according to sense or appearance; and that it is such, it appears, so far as it forms not of itself alone the most simple organical part, as a finger or toe, &c. but they take into their composition, with a muscle, several other similar parts, as bones, cartilages, membranes, skin, &c. Moreover a truly dissimilar or organical part is only found in itself, not in other parts: but a muscle, as it is but a part of all dissimilar parts, so it goes universally or every where to the constitution of all organical parts, which even the most simple organical parts do not.

The muscles of the head are either proper, from which comes the primary motion upon the first vertebra, to which it is immediately and closely joined, being bent forward and backward, or turned round; and they are in number eighteen single, or nine pair: or common, which are those, which together with the head move the neck, and these are the muscles of the neck, of which in their proper place. The first pair is called splenius or splenicus, or triangularis; it proceeds from the first vertebra of the breast, is spread out on each side upon the vertebra, reaching to the third vertebra of the neck, from whence it is carried to the middle of the occiput; its use is to draw the head directly backwards: but, if only one of the muscles act, the motion is circular to one side. The second pair is called complexus or trigeminus: it is a large muscle assisting the other. It has divers beginnings at the seventh vertebra of the neck, and at the first, third, and fourth, of the breast, and is after a different manner terminated in the *occiput*. The third pair is called *sub secundo*, and inserted into the hindermost root of the *processus mamillaris*: its use is lightly to bring the head backwards; or backwards to one side, if but one muscle

cle acts. The fourth pair, called *reſti majores*, are ſmall, fleſhy, and lean, and ſpring from the edge of the ſecond ſpondil or *vertebra* of the neck, ending in the middle of the *occiput*. The fifth pair, called *reſti minores*, lie concealed under the former, proceeding from the back part of the firſt ſpondil, or *vertebra* of the neck, and is inſerted into the *occiput*; its uſe is the ſame with the third and fourth pair. The ſixth pair is called *obliqui majores*; it lies beneath and ſprings from the proceſs of the firſt *vertebra*, and ends in the *occiput*, by the outſide of the *reſti*. The ſeventh pair is called *obliqui minores*, it ariſes from the ſecond *vertebra* of the neck, is inſerted into the tranſverſe proceſs of the firſt *vertebra*, and terminates in the *occiput*: the uſe of theſe two oblique pair is to bring the head about to the ſides. The eighth pair, called *maſtoides*, is placed in the forepart; they ariſe for the moſt part double, long, and round, in the forepart of the neck, from the upper part of the *ſternum* or breast-bone, and miſt of the *clavicula*, and is obliquely inſerted into the mammillary proceſs, which it embraces; its uſe is to turn the head. The ninth pair, called *fallopiiani*, lies under the throat in the forepart of the neck, and near the firſt pair of the neck; it ariſes nervous from the ligaments of the *vertebra* of the neck, and is inſerted into the baſis of the head, which it turns in like manner as the former.

The muſcles of the forehead have their original from the upper parts of the forehead and ſkull, near the coronal future, and, being ſpread out upon the bone thereof, they end at the eye-brows, that they might lift them up, being ſeſered in the miſt of the forehead, right above the noſe; but knit at the ſides to the temporal muſcles.

The muſcles of the *occiput*, or hind part of the head, are rather membranes, which draw backwards the ſkin of the head, in ſuch perſons as have the ſkin moveable.

The two eye-lids are moved by four muſcles: the firſt is the *frontalis*, which is ſtraight, belonging to the upper eye-lid, to lift up the brow. The ſecond is the *musculus ciliaris primus*, which compaſſes about each of the eye-lids. The third is the *musculus ciliaris ſecundus*, which is drawn out under the eye-lids, and ariſing from the circumference of the *orbita*, or ſocket of the eye; the uſe of theſe *ciliaris* is to ſhut the eye-lids. The fourth is *orbicularis major*; it is of a finger's breadth, encompaſſes the ſurface of the *orbita*, or ſocket, and being placed under each eye-lid, and reaching as far as the eye-brow, it cloſely ſhuts the eye-lids, by lifting up the lower, and drawing down the eye-brow.

The eye hath ſix muſcles, of which four are ſtrait, and two oblique or circular; they are all ſeated within the cavity of the ſkull, and accompany the optic nerve. The firſt muſcle is called *attollens* or *ſuperbus*; it is the upper and thicker, and is the lifter up of the eye, being the proud or ſcornful muſcle. The ſecond is called

called *deprimens* (the depresser) and *musculus bumilis*; it is placed opposite to the other, and draws the eyes downwards towards the cheeks. The third is called *adducens*, the drawer to; also *lectorius*, the reading muscle, because it moves the eye inwards towards the nose. The fourth is called *abducens*, the drawer from, because it draws the eye to the outward corner; it is also termed the *indignatorius*, as being the muscle of indignation. All these four muscles have the same original, progress, and end; the beginning of them all is acute, near the hole where the optic nerve enters into the socket of the eye, from the membrane whereof they arise; their belly is fleshy and round, and their end a very small tendon: by all these four acting together, the eye is kept from stirring. The fifth muscle, called *obliquus major*, or *superior*, arises from a common beginning with the first four, is carried right out to the inner corner of the eye, where it passes out and ascends in a right angle to the upper side of the *cornea*: this muscle is the smallest of all, and has the longest tendon, by which it wheels the eye about unto the inner corner. The sixth muscle, called *obliquus internus minor* and *inferior*, is a short, lean, round, and oblique, muscle, seated between the eyes and tendons of the second and third muscle; it springs from the lower and almost outward part of the orbit of the eye, and, ascending by the outward corner to the upper part of the eye, is inserted into the *cornea* by the region of the *iris*. It whirls about the eye obliquely downwards to its external or outward corner.

The muscles of the external part of the ear are four pair; of the internal part, two pair; but in most people the ears are immoveable, because of the smallness of the muscles and little need of their motion. Of the four first muscles, three are common with other parts; the fourth is proper to itself. The first muscle is called *deprimens*, common to the ear and each lip, and is a part of the first muscle which moves the cheeks and skin of the face, and is called *quadratus*, the square muscle, very thin and broad, and is implanted into the root of the ear, and pulls it down. The second is called *antrorsum ducens*, or the drawer forwards; it is a part of the frontal muscle, which is carried above the temporal muscle, and is inserted into the upper part of the ear. The third muscle is called *retrosum ducens*, or *abducens ad posteriora*, the drawer back, and arises from a part of the occipital muscle, above the *processus mammillaris*, with a narrow beginning, from whence, growing broader, it is carried downwards transversely, and inserted into the hinder part of the ear. The fourth muscle is called *tripartitus*, or *attolens*, the lifter up; it arises from the *processus mammillaris*, and being broad it grows narrow by little and little, till at last it ends in a tendon, and is inserted into the root of the ear. This is the only proper muscle to the ear, and is rather three-fold, because it has three insertions, though all spring
from

from one place. The fifth muscle which belongs to the internal part of the ear is called *externus*: it is very small, springing from the skin and membrane which cover the passage of the ear; then, becoming fleshy, it passeth by a short tendon to the outward part of the *tympanum*, and is inserted about the center of it. The sixth muscle which belongs to the internal part of the ear is called *internus*: it is small, and placed within the *os petrosum*, with a double tendon, one part of which is fixed to the higher process of the *malleolus* or hammer, the other to its neck. It arises from the basis of the wedge-like bone, then becomes somewhat fleshy, afterwards narrower, and ends in a double tendon. Its use is to draw the head of the hammer obliquely inward.

The nose has eight muscles, or four pair, especially in large-nosed people, but they are small, because the motion of the nose is little. The first pair are called *openers* or *wideners*: they are fleshy, arise from the cheek-bone near the muscle of the lips and sides of the nose; they are inserted partly into a part of the upper lip, partly into the lower wing, and end in the top of the nose. The second pair is called *ereciores* or *aperientes*, *openers*: they are mostly triangular, and with a sharp and fleshy beginning spring from the suture of the forehead by the *foramen lachrymale*, under the tear glandule, and, cleaving to the bone, are outwardly inserted and carried to the *pinnae*, wings, or sides of the nose. The third pair are called *constringentes*, or pulling together: they are little, arise fleshy about the roots of the *pinnae*, are carried along transversely, and inserted into the corners of the wings: their use is a little to shut the nostrils. The fourth pair are called *deprimentes*: these are exceeding firm, and membranous, lie hid under the coat of the nostrils in the inner part: they arise from the extremity of the *os nasi*, and are implanted into the *pinnae* or wings; their use is to depress the nose, or pull it downwards.

The muscles common to both cheeks and lips are, 1. *zigomaticus* or *quadratus detrabens*: it is a thin muscle like a membrane, interlaced with fleshy fibres. It arises from the *vertebrae* of the neck, in the outward side, and ascending up by the oblique fibres to the face is implanted in the chin, and terminated in the meeting of the two lips: this pair draws the lips backwards. 2. *Buccinator*, the trumpeter, or cheek driver or mover: this pair lieth under the former in the upper part of it; and makes up all that part of the cheek which is blown up when a trumpet is sounded. It arises from the top of the gums near the farthest grinders, and ends in each lip. The muscles proper to the lips are either proper to each lip or common to both. The upper lip has two pair of muscles proper to it; the lower has but one. The first pair is *attolens* or *sursum trahens*, which draws the lip upwards: it springs from the corner between the eyes and the nose, and is inserted into the substance of the upper lip. The second pair, called *deorsum movens*,

arises from the upper jaw-bone, just in the cavity of the cheeks, under the socket of the eye, thin, but broad and fleshy. The third pair, called *deorsum trahens*, proper to the lower lip only, arises from the middle of the chin, with a broad beginning, and ascends directly to the middle of the lower lip, which it moves upwards. The muscles also common or belonging to both lips are also three pair, first, *oblique sursum trahens*, that which obliquely draws upwards. The second pair common is *oblique deorsum trahens*, or *deprimens*, moving the lips obliquely downwards. The third common to both lips is circular, encompassing and constituting the whole mouth, making the proper substance of the lips: by help whereof, the mouth is pursed up, or drawn together.

The muscles of the lower jaw are in number twelve, viz. six pair, being six on either side. 1. *Temporalis, crotaphites*, the temporal muscle, so called from its situation, because it possesses the cavities of the temples: it is the greatest of all the jaw-muscles, being very firm and strong; it runs along under the *os zigoma*, and is by a very strong and nervous tendon inserted into the sharp process of the jaw-bone. Its use is forcibly to pull up the lower jaw, and to shut the mouth. 2. *Masseter*, the chewing muscle, or first chewer: it is placed in the cheeks, and arises from a double head. It is inserted into the inferior jaw-bone, by a very broad and strong connection. 3. *Alare externum*, the outward wing muscle. It arises from the *os sphænoïdes* and the external *processus alaris*, with a beginning partly nervous and partly fleshy, and is inserted into the neck of the lower jaw-bone, and in the inner seat of the head. Its use is to move forwards and thrust out. 4. *Masseter internus*, the other chewer, is thick and short, and is implanted into the inner and hinder part of the jaw, with a broad and strong tendon. Its use is to assist the temporal muscle. 5. *Musculus latus*, the double-bellied muscle, or broad muscle. It is nervous in the middle, and fleshy at the ends, and is inserted into the chin, under the bending of the jaw, fastened to a ligament, lest it should go too far back. Its use is to draw the jaw downwards to open the mouth. 6. *Musculus latus*, the broad or broadest muscle. It arises from the upper part of the *sternum*, the *clavicula*, and shoulder-point, and, covering the whole neck and face, it cleaves firmly to the inferior jaw, and is fixed in the middle of the chin. The four last muscles draw the jaw upwards, and are exceeding strong; the last two only draw it downwards, because it would be apt to depress itself.

The muscles of the *os hyoides* or tongue-bone, which is the foundation of the tongue, are in number four pair. 1. *Sterno-hyoides*: it arises from the inner but upper part of the *sternum*, and resting upon the windpipe lies concealed in the forepart under the skin. 2. *Genio-hyoides*, which arises from the inner part of the chin, fleshy,
broad,

broad, short, and is inserted into the middle or hollow of the *os hyoides*. 3. *Stylocerato-hyoides*: it arises from the root of the *processus styloides*, being lean, round, and seated under the chin. 4. *Cerato hyoides*: it arises at the first, small, lean, and long, from the upper side of the *scapula*, becomes fleshy about the neck, and, passing under the levator of the shoulder-blade, is inserted into the point of the *hyoides*. This pair is long, and has two bellies, being extenuated in the middle like a tendon.

The muscles moving the tongue are in number five pair: 1. *Styloglossum*, arising from the outside of the *appendix styloides*, and ending with transverse fibres, in both sides of the tongue; it moves the tongue inwards; and, by reason of the interwoven fibres, they lift the tongue upwards, if they act both together; or upwards only on one side, if only one acts. 2. *Myloglossum*, arising from the sides of the lower jaw, at the roots of the grinding teeth, and ending under the basis of the tongue in the ligament: when both act, they move the tongue to the pallet and upper teeth; but when one acts the tongue is moved obliquely upwards. 3. *Genioglossum*, arising inwardly from the middle of the chin, and terminating almost in the middle of the tongue inwardly: its use is to thrust the tongue out of the mouth, and also to draw it in again, so that it seems to perform contrary actions. 4. *Hyphoglossum*, arising fleshy out of the upper and middle region of the *os hyoides*, runs along according to the length of the tongue; and is terminated into the middle of it: this pair draws the tongue inward. 5. *Ceratoglossum*, which arises from the upper horns of the *hyoides*, and is obliquely inserted into the sides of the tongue, near the root thereof. It moves the tongue downward toward the inward parts, when both act; but to the right or left side, if only one be contracted.

The muscles of the *larynx*, or windpipe, are either common or proper; the common are two pair, *sternothyroides* and *hyothyroides*. 1. *Sternothyroides* arises from the inner side of the *sternum*, runs along by the *larynx*, and is inserted beneath into the sides of the *scutiformis*, or shield-shaped gristle. This straightens the chink of the *larynx*, by drawing down the *scutiformis*. *Hyothyroides*, arises from the lower side of the *os hyoides*, being broad and fleshy, and touches the *scutiformis*, and is inserted into its basis. It widens the chink, by lifting up the *scutiformis*. These common muscles are implanted into the *larynx*, but do not arise therefrom. The proper muscles are five pair; 1. *thyrocricoides* arises from the lowest part of the *scutiformis*, and ends at the *annularis*, and is inserted into the lateral parts of the *thyroides*. 2. *Cricothyroides* rises from the hinder sides of the *annularis*, fleshy; and is inserted into the lower part of the *glottalis*, with a nervous end, opening the *larynx* by drawing asunder the two gristles called *arytenoides*. 3. *Cricoarythenoides laterale*, springs above from the side of the *annularis*, and is implanted at the sides of the *glottalis*, into the joint,

joint, and opens the *larynx* with the same oblique motion of the gristles. 4. *Thyroarytenoides*, or *glottoides*; this helps the former, and, springing from the inner and fore part of the *thyroides*, is terminated into the lateral part or sides of the *glottalis*, or *arytenoides*, which shuts the *larynx* by a straight passage; if this pair is inflamed in a quinsy, it is mortal, because it exactly shuts the chink. 5. *Arytenoides* is a round muscle, compassing the ewer-like cartilage: it arises from the hinder line of the *guttalis*, and, being carried along with transverse fibres, is inserted into the sides thereof.

The *uvula* has two pair of muscles, two on either side, viz. an external and internal pair. 1. *Ptery-staphylinus externus* rises from the upper jaw, and under the last grinding tooth, ends in a small tendon, which passes through a chink on the upper side of the *pterygoides*. 2. *Ptery-staphylinus internus* proceeds from the lower part of the internal wing of the *pterygoides*, and ascending according to the longitude of the wing is inserted in like manner into the *uvula*.

The *pharynx* or throat, which is the beginning of the *œsophagus* or gullet, has seven muscles belonging to it, viz. three pair, and one without a fellow. 1. *Sphæ-nopharyngeus*, which springs from the sharp point of the *sphænoides*, and, passing downwards, is inserted into the lateral parts of the *pharynx*, or throat, to pull up the mouth of the stomach, that it may receive the meat. 2. *Cephalopharyngeus*, which spring from the part where the head is joined to the neck, and, running down, is spread about the *pharynx* or *œsophagus*, seeming to make the membrane of it. 3. *Stylopharyngeus*, which springs from the *styloides process*, and is inserted into the sides of the *pharynx*, both to dilate and amplify it. 4. *Oesophægus*. The muscle without a fellow, being only a sphincter-like muscle, encompassing the gullet. It springs from one side of the *thyroides*, and circularly encompassing the hinder part of the *pharynx* is tied to both the sides of the *thyroides*, to contract the mouth of the stomach as the *sphincter* doth the *anus*.

The muscles of the neck are four pair. The two first pair, to wit, *musculus longus* and *musculus scalenus*, bend the neck; the two latter pair, viz. *musculus transversalis* and *musculus spinatus*, extend it. 1. *Longus* lies under the *œsophagus* or gullet, springs from the fifth *vertebra* of the breast, with a beginning fleshy and sharp, ascends laterally, annexed to all the bodies of the *vertebræ*, terminating in the extuberant process of the *vertebræ*, with an acute tendon, and sometimes is inserted into the *occiput*, near its great hole. 2. *Scalenus* arises fleshy, at the side of the neck, from the first rib, and is inserted inwardly, by oblique fibres, into all the transverse processes of the *vertebræ* of the neck; through this pair, the veins and arteries enter into the arm. 3. *Transversalis*, arising from the transverse eminences or processes of the six upper-

most *vertebra* of the breast, and is inserted into all the external transverse eminences of the neck. 4. *Spinatus*, arising from the roots of the seven uppermost *vertebra* of the breast, five of the neck, and is inserted into the spine or point of the second *vertebra* of the neck.

The muscles of the breast or *thorax* are in number sixteen, viz. eight on either side, of which the first five widen or lift up the breast: the last three contract it; to these add, as a ninth, one peculiar muscle, called *diaphragma* or the midriff. 1. *Subclavius*, it arises from the inner part of the *clavicula*, is of a fleshy substance, and is drawn upwards and outwards, and inserted into the upper part of the first rib. 2. *Serratus major*, the greater saw-like muscle, it reaches from the inner basis of the *scapula* unto six and sometimes seven of the ribs. 3. *Serratus posticus superior*, which grows out of the sharp points or spines of the three lower *vertebrae* of the neck, and the first of the back, and is inserted into the three upper ribs, and sometimes into the fourth. 4. *Musculi intercostales externi*, these are eleven pair in number, but perform the office of one muscle only; are interwoven, totally fleshy, and arise from the lower parts of the upper ribs, and, descending obliquely towards the back parts, are inserted into the upper parts of the lower ribs, terminating on the cartilages. 5. *Triangularis*, it is small and thin in lean persons, springs out of the inner and lower part of the *sternum*, and is inserted into the cartilages of the lower ribs, as far as the third or fourth of the bastard ribs. 6. *Sacro-lumbus*, which springs from the *os sacrum*, and the spinous processes of the loins, and is inserted into the upper ribs near their roots, bestowing upon each rib a double tendon, one external, the other internal. 7. *Serratus posticus inferior*, it is opposite to the superior; and both of them, by a broad and membranous tendon, so grow together, that they serve instead of a band to keep the hinder muscle of the back-bone together: it grows out of the spines or processes of the three lowest *vertebrae* of the back, and first of the loins, is terminated in three or four of the lower ribs. 8. *Musculi intercostales interni*, these are the same in number and place with the *externi*, and lie directly under them; they are carried obliquely from the nether rib to the uppermost, and have fibres contrary to those of the external, crosswise intersected. 9. *Diaphragma* or midriff, called also *precordia*, because it is stretched out before the heart; and *phrenes*, because, being affected, the mind and senses are disturbed, by reason of the consent it has with the brain: so that, when the midriff is inflamed, a phrenzy is caused. It is one in number, an instrument of free motion, and an admirable kind of muscle, both in regard of its composition and continual action or motion, serving also as a wall of partition to sever the vital and natural parts one from another. The head of it is in the nervous center, but the tail in the circumference of the lower short ribs, from whence it

arises, and through which it is obliquely drawn about, as far as to the *vertebra* of the loins. It has a double membrane for strength sake, the upper is from the *pleura*, to which the *pericardium* is firmly fastened, and sometimes also the lobes of the lungs; the lower is from the *peritoneum*.

The muscles of the back and loins are four pair; the first pair is *quadratum*, adhering to the transverse processes of the *vertebra* of the loins, arising inwardly from the *os ilium* and *os sacrum*, broad and fleshy. Its use is to bend the *vertebra* of the loins. 2. *Longissimum*, arises with an acute and strong tendon from the extremity of the *os sacrum*, the *vertebra* of the loins, and *os ilii*, having the same beginning with the *sacrolumbus*; to the *vertebra* of the back it gives tendons like clasps, terminating sometimes in the first *vertebra* of the breast, and sometimes at the *mammillary processes*. 3. *Sacrum* arises from the *os sacrum* behind, being fleshy, and terminates in the twelfth *vertebra* of the breast. 4. *Semispinatum*, which arises where the former ends, and embracing all the spines of the *vertebra* of the breast, and giving them tendons, it terminates in the spine of the first *vertebra* of the breast. The uses of these three last are to extend the breast, loins, and their *vertebrae*: if all the eight muscles act, they hold the back straight, and as it were uphold a man.

The muscles of the abdomen or belly cover the lower belly, and have their names partly from their situation and rise, and partly from their figure. They are in number ten, or five pair, whose principal uses are to impel the internal parts, and to move the *os sacrum* and *ilium*: or to make a proper retention and compression of the parts in the belly: to provoke voiding the excrements, or help the expulsive faculty of the womb and bladder. Their temperament is hot and moist, to cherish natural heat and concoction: they are moderately thick, to defend the parts, and, when very fleshy, they add much to the comeliness of the body. The first pair is *obliquus descendens*, so called by reason of its fibres, which descend obliquely. It rises in the breast from the lower part of the sixth, seventh, and eighth, ribs, and terminates in the white line by a broad tendon. 2. *Obliquus ascendens* is situated next the former, in a triangular figure, rising fleshy from the rib of the *os ilii*, but membranous from the sharp processes of the *vertebrae* of the loins, and from the sharp points of the *os sacrum*: it ascends obliquely, and terminates in a double tendon embracing the *musculus rectus* like a sheath; but the duplicity appears only above the navel, for below it it is united inseparably. 3. *Musculus rectus*; its origin is fleshy, from the *sternum*, on each side the sword-like cartilage, and from the cartilages of the four bastard ribs: it has three nervous insertions which strengthen it; and veins which run along the longitude of it, viz. the *mammariæ descendentes* from the breasts, and the *epigastricæ ascendentes* from the womb in women, but from

from the *vena cava* in men; which meet about the middle of this muscle, extending as far as the region of the navel, and are there terminated. These two veins are joined by *anastomosis*, from whence the consent of the womb with the breasts is caused; which, being handled, excites women to venery. 4. *Musculi pyramidales*, the pyramidal muscles, lie upon the extremities of the *musculi recti*, and rise with a fleshy beginning from the external share bone, where all the nerves enter; and, growing narrower by degrees, they terminate with a sharp point in the tendon of the transverse muscle. Their office is to compress the bladder, and therefore they send their tendons, between the *musculi recti*, into that part of the *peritonæum* which includes the bladder. 5. *Musculi transversi*, the cross muscle, arising from a certain ligament which springs out of the *os sacrum*; and, terminating by a broad membranous tendon in the *linea alba*, stick extremely fast to the *peritonæum* every where except about the *pubis*. Its proper use is to compress the colon.

The muscles of the *os ilium* and *sacrum* are moved forward in coition by the *musculi recti* and *obliqui descendentes* of the belly, the breast resting and the thigh remaining unmoved. They are moved backwards by the *musculus facer* and *semispinatus*, which arise from the *vertebra* of the back, &c.

The muscles of the *penis* or yard are two pair; the first pair is called *erector*, or *director*; the latter, *accelerator*. 1. *Erector*, or *penem erigens*, is a short and thick pair, arising nervous under the beginning of the yard, from the innermost bunching out of the *ischium*, and, being knit unto the ligament of the yard, growing fleshy, it reaches side-ways as far as the middle of the body thereof: their uses are to erect and keep up the yard in coition. 2. *Musculi acceleratores*, or *par urethram dilatans*, are longer than the former, but thinner or leaner; they arise both from the *sphincter* of the *anus* and internal tuberosity of the *ischium* or huckle-bone, are spread out under the *urethra*, carried beneath, and inserted into the sides thereof, about its middle: its use is to dilate or widen the *urethra* both for the passage of the urine and for the seed in coition. These are the muscles where an appertion is commonly made in cutting for the stone.

The muscles of the *clitoris*, proper to female subjects, are like those in a man's yard, the same in number, and to the same intent. The two uppermost being round, rise from the internal knob of the *ischium*, and, being placed by the lateral ligaments, cause the erection of it. The two lower are broad and smooth, and proceed from the *sphincter* of the *anus*.

The muscles of the testicles are either proper or common. The proper muscles are only the pair called *cremaster*, arising from a strong ligament in the *os pubis*, where the transverse muscles of the belly end, of which they seem to be parts; they pass

pass through the production of the *peritoneum* which they compass nearly about, and pass with the spermatic vessels to the stones; they are shorter in women than in men, and are placed above the production of the *peritoneum*: their use is to sustain or hold up the stones. The common muscle is the membrane of the *scrotum* called *dartos*, being a continuation of the fleshy membrane; and this musculous membrane suspends both testicles.

The bladder has but one muscle, called *sphincter*, which encompasseth the neck of the bladder, in an orbicular form, as also are the fibres. It is fleshy, drawn back over the *prostate* or auxiliary testicles; it ejaculates the seed in coition. In women it reaches to the hole by which the urine passes, and it seems to form it.

The muscles of the *anus*, or fundament, are either the *sphincter* or the *levator*; the *sphincter* muscle, called *ani constrictor*, the shutter or contractor, is fleshy, (and without the straight gut two inches broad;) arises from the lower *vertebra* of the *os sacrum*; and is encompassed with the transverse fibres all along the *anus*: it is fastened on the fore part to the passage of the bladder by fibrous couplings, to the yard, to whose muscles it gives beginning; and to the neck of the womb: on the hinder part it is inserted into the *coccyx* or crupper-bone, and at the sides it is fastened into the *os coxæ*. The *musculi levatores* are four, or two pair; one pair of which are broad, and one narrow. *Musculi levatores lati*, arise from the *os sacrum* and *os ilium*, and are inserted into the larger *sphincter*. *Musculi levatores tenues*, the narrow muscles: of which the foremost arises from the transverse ligament; the hindmost from the *coccyx*, whereunto they are terminated:

The muscles of the shoulder-blade, or *scapula*, are four, according to the number of its motions, viz. forward and backward, upward and downward: 1. *serratus minor*, the smaller saw-like muscle, arising from the four upper ribs, and ascending obliquely upwards, with an end partly fleshy, partly tendinous, and is inserted into the *scapula*; its use is to draw forwards into the breast: 2. *trapezius, cucularis*, arises fleshy from the hinder part of the head towards the ear, from whence it descends to the eighth *vertebra* of the breast, and, from thence growing small by degrees, it is inserted into the back-bone, top of the shoulder, and *clavicula*; it moves the *scapula* variously, according to its oblique fibres: 3. *rhomboides*, or diamond-like muscles, situate under the *cucularis*, thin and broad, arise from the three lower *vertebra* of the neck and the three upper *vertebra* of the breast, and in the same breadth are inserted into the external basis of the *scapula*; it draws back a little obliquely upwards: 4. *levator musculi patientiæ*, arises from the transverse apophyses of the second, third, and fourth, *vertebra* of the neck, and is inserted into the higher and lower corners of the *scapula*; its use is to lift the shoulder up.

The arm is variously moved, therefore has it many muscles, to wit, nine in number. 1. *Pectoralis* is great and fleshy, arising from the whole breast-bone, and gristle thereof, the *sternum*, and above half the *clavicula*, and is by a sharp tendon inserted into the shoulder-bone, between the *deltoides* and the *biceps*. 2. *Deltoides*, from likeness to the letter Δ , springs from the middle of the *clavicula*, and the *acromium*, and is inserted into the middle of the arm or shoulder-bone. 3. *Latissimus*, springs from the *vertebræ* of the loins, and of nine *vertebra* of the back, and is inserted into a part of the arm, between the pectoral and round muscle, with a strong, short, and broad, tendon: this with its fellow of the other arm covers almost the whole back: it is called *ani sculptor*, because it draws the arm backwards and downwards. 4. *Rotundus major* is fleshy, thicker, and rounder, than the rest, obliquely seated behind under the *axilla*, and arises from the lower rib of the *scapula*, which, ascending a little with its tendon, short, broad, and strong, is inserted (with the pectoral muscle) into the middle of the arm. 5. *Rotundus minor*, is short, round, quite fleshy, and arises with a sharp beginning out of the lower corner of the *scapula*, terminating with an acute end in that ligament, with which the head of the shoulder is involved. 6. *Infra spinatus*, arises in the middle between the smaller round muscle and the *spina*, covers the whole external bunching part of the *scapula*; then, becoming more narrow, it is inserted into the neck of the arm, or shoulder. 7. *Supra-spinatus*, is fleshy, and arises out of the spine of the upper rib of the *scapula*, then, being conveyed under the *acromium*, it is inserted with a broad and strong tendon into the neck of the arm, at the ligament of the joint. 8. *Subscapularis*, or *immersus*, is very fleshy, and passes between the *scapula* and ribs, possessing the hollow and inward part of the shoulder-blade, then is carried out, and inserted, with a broad tendon, internally into the second ligament of the *humerus*. *Coracoides*, is inserted into the inner part of the shoulder, about the middle of the arm, by the tendon of the *deltoides*. Its beginning is nervous and short: and its belly has an hole in it (whence its name) to give a passage to the nerves running to the muscles of the cubit.

The cubit or elbow has two bones, the *ulna* and *radius*: the *ulna* serves for flexion and extension; but the *radius* for pronation and supination. The *ulna* is bended by two muscles, the *biceps* and *brachieus internus*, and extended by four, viz. *longus*, *brevis*, *cubitalis*, and *brachieus externus*. 1. *Biceps*, arises from the *scapula*, round and tendinous, which is inserted into the inner part of the *radius*. 2. *Brachieus internus* is placed beneath the *biceps*, smaller than the former, and arising from the middle of the *os brachii*, and is inserted before into the common beginning of the *radius* and *ulna*. 3. *Longus*, or *extendens primus*, arises from the lower rib of the shoulder-blade,

near the neck, with a double beginning, and is terminated in the elbow. 4. *Brevis extendens secundus*, springs from the hinder neck of the arm, mixed with the foregoing muscle, clothes the *humeri*, and terminates on the outside of the elbow. 5. *Anconæus extendens tertius*, it is situate in the bending of the cubit, on the hinder side; it arises out of the lower and hinder part of the arm, between the ulna and radius, and is inserted by a nervous tendon into the side of the cubit. 6. *Brachæus externus*, being spread out upon the outside of the brachium: it is a fleshy lump, made of the two former, and is placed under them, being inserted into the same place.

The radius has four muscles, two of which are *pronatores* or pullers down; and two *supinatores* or pullers up. 1. *Pronator superior* arises from the inner apophysis of the arm, by a strong and fleshy beginning, and ends with a membranous tendon, obliquely running into the middle of the radius. 2. *Pronator inferior*, from the lower part of the cubit ulna, unto the lower part of the radius, and is there inserted. 3. *Supinator longior*, from the top of the brachium, above the external knob, and, being drawn out upon the radius, is inserted on the inside of the lower epiphysis thereof. 4. *Supinator brevior*, springs from the outward apophysis of the arm, fleshy within, membranous without, and is inserted nearly into the middle of the radius.

To the wrist belong four muscles, of which the first two bend it and the latter two extend it. 1. *Cubiteus internus*, the first bender, arises from the internal apophysis of the arm, and, being stretched over the elbow, is inserted with a thick tendon into the fourth bone of the wrist. 2. *Radius internus*, the second bender, is drawn along the radius, arises from the beginning with the former, and terminates in the first bone of the metacarpium, under the fore-finger. 3. *Radius externus*, arises with a broad beginning, from the external apophysis of the arm, and terminates in a double tendon at the first and second bones of the os metacarpi. 4. *Cubiteus externus*, arises from the same beginning, through the length of the cubit; when it comes to the wrist, it becomes a strong, round, tendon, and is inserted into the upper part of the fourth bone of the metacarpium, under the little finger.

In the palm or hollow of the hand are two muscles, called *palmares*, of which the one is long, the other short. 1. *Palmaris longus*, arises from the inward apophysis of the arm, with a round and tendinous beginning, is spread into the hollow of the hand, cleaving exceeding fast to the skin, where under the skin, in the hollow of the palm, is a broad tendon, giving exquisite sense to that part; it is terminated into the first intervals between the joints of the fingers. 2. *Palmaris brevis*, is a certain four-square fleshy substance, springing from the *membrana carnosæ*, from whence it is carried under the former muscle, to the middle of the palm of the hand, and is inserted into the outside of that tendon, which bears the little finger from the rest.

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The thumb is bent by two muscles; extended by two; and drawn side-ways by six. *Flexor primus*, arising from the upper part of the *radius*, is inserted into one of the joints. 2. *Flexor secundus*, arising from the wrist-bone, is inserted into the middle of the thumb, and lies wholly under the former. 3. *Extensor primus*, arising out of the upper and outward side of the cubit, runs along the *radius*, is carried beyond the wrist, and is inserted into the first and second joint of the thumb, by a double and sometimes triple tendon. 4. *Extensor alter*, arises from the same part of the cubit, but lower near the wrist, and is inserted into the third joint of the thumb. 5. *Adducens primus*, is joined unto and seated beneath the *thenar*, arising out of the three lower bones of the *metacarpium*, and is inserted into the second joint of the thumb; this draws the thumb to the fore-finger. 6. *Adducens secundus*, the second drawer of the thumb to the fore-finger; it arises out of the *metacarpium*, and is inserted as the other. 7. *Adducens tertius*, drawing also the thumb to the fore-finger, arises out of the external side of the *metacarpium*, which sustains the thumb, and is inserted into the first joint. 8. *Abducens primus*, or *thenar*, the first drawer away, arises from the inside of the wrist, and is inserted into the second joint of the thumb, to draw it from the fingers. 9, 10. *Abducens secundus* and *tertius*, they arise and are inserted as the former, to draw the thumb also from the fore-finger.

The fingers are bent, extended, and moved laterally; for the performance of which are seventeen muscles; they are as follows: *sublimis* or *perforatus*, it arises from the inner *apophysis* of the arm, it is divided into four tendons inclosed in a ligament, as it were in a ring, which are inserted into the second jointing of the fingers, a cleft being first made, through which the tendons of the following muscles pass. *Profundus* or *perforans*, is spread out under the former, and is inserted through the clefts of the former tendons, into the third jointings of the fingers; it arises from the upper parts of the *ulna* or *radius* under the joint, and is divided into four tendons. *Hypothenar digiti minimi, proprius auricularis*, the muscle proper to the little finger, it arises in the hollow of the hand, from the third and fourth wrist-bones of the second rank, and is inserted externally into the side of the first joint of the said finger. *Extensor magnus*, arises from the exterior *apophysis* of the arm about the wrist, and the ring-fashioned ligament; is divided into four tendons, which end in the lowermost joints of the fingers. *Indicator indicis extensor*, it arises from the middle and external part of the cubit or *ulna*, and is terminated with a double tendon into the second interjointure of the fore-finger. *Auricularis*, the extensor of the little finger, it arises from the upper part of the *radius*, and, being carried along with the *ulna* and *radius*, is externally inserted into the little finger with a double tendon. *Lumbricales, adducens primus, secundus, tertius, quartus*, the four worm-like muscles; they

they arise from the tendons of the *musculus profundus* by the wrist; and, being drawn out along the sides of the fingers, are obliquely carried and inserted into the third jointing of every finger. *Abductores interossei externi* and *interni*, the drawers from the thumb; they arise from the upper parts of the bones of the metacarpium near the wrist, and in the first internodum or space between the joints, with a very small tendon, which, joining with the *vermiculares*, run along the sides of the fingers, over the three bones, till they come to the roots of the nails; in the former and upper part whereof, the tendons, being first united, are terminated. *Abductor indicis*, it arises from the first interjointing of the thumb, and is inserted into the bones of the forefinger, by which it is drawn from the rest of the fingers towards the thumb.

The thighs are capable of being bent, extended, drawn to or wheeled inward, or turned about outwards; for the performance of which, they have the following sixteen muscles. 1. *Psoas primus lumbarus*, the first loin-muscle; it arises from the vertebræ of the loins, and is inserted into the forepart of the small trochanter, with a round and strong tendon. 2. *Psoas minor*, it is sometimes spread over, sometimes under, the former; its beginning is fleshy, sometimes one, two, or three, fingers broad in its middle; its original, with a small and flat tendon, being carried over or under the *psoas*, comes to the iliac, and with a very broad and strong tendon is inserted into the upper brim of the *os ilii*. 3. *Iliacus musculus*, rises out of the internal cavity of the *os ilium*, is joined by its tendon with the lumbal muscle, and is terminated between the great and little trochanter. 4. *Musculus pectineus*, the comb muscle, springs out of the upper part of the *os pubis*, and is inserted with a short tendon into the inner side of the thigh. 5. *Triceps primus*, arises from the upper jointing of the *os pubis*, and, passing by the inner head of the thigh-bone, is inserted into the middle of the thigh. 6. *Triceps secundus*, arises from the lowest jointing of the *os pubis*, and, passing by the inner head of the thigh, runs along to the end of the thigh. 7. *Triceps tertius*, arises from the middle of the *os pubis*, and is inserted just below the neck of the thigh-bone. These three muscles many reckon but one, and call it *triceps*, from its threefold beginning, but so accounted it is the greatest of all the muscles of the body: and often ends in one musculous tendon, inserted into the hinder part of the bone. 8. *Gluteus major*, arises from the coccyx or crupper, (the spine of the *ilii* and *os sacrum*,) and is inserted into the *os femoris*, under the great trochanter. 9. *Gluteus medius*, the middlemost both in situation and magnitude, arises from the inner side of the spine of the *os ilii*, and is inserted into the great trochanter, with a broad and strong tendon. 10. *Gluteus minimus internus*, springs from the back of the *os ilii*, near the acetabulum, with a broad and strong tendon, and is inserted into the great trochanter: these last three make up the fleshy substance of

the buttocks. 11. *Quadrigenus primus*, it arises from the lower part of the os sacrum, and is placed upon the articulation of the thigh, in the hinder part thereof. 12. *Quadrigenus secundus*, arises from the tuberosity of the huckle-bone, and covers the articulation of the thigh, as aforesaid. 13. *Quadrigenus tertius*, is contiguous to the former, and arises from the same part : these three last are inserted into the cavity of the great trochanter. 14. *Quadrigenorum quartus*, it is broader and more fleshy than the other three, being distant from the third of the quadrigeni two fingers breadth ; it springs from the inner side of the apophysis of the ischium or huckle-bone, and is inserted into the external part of the great trochanter. 15. *Obturator externus* takes up the wide hole, between the os pubis and os ischii, and arises from the outward circle of the os pubis, is circumducted through the neck of the thigh, and carried into the cavity of the great trochanter, under the fourth quadrigenal muscle. 16. *Obturator internus*, rises from the inward circle of the os pubis, and by a tripartite tendon is inserted into the cavity of the great trochanter.

To the legs belong eleven muscles, viz. 1. *Biceps*, having two heads ; the first springs from the joining of the os pubis, the second from the outward part of the thigh ; both of them are inserted with one tendon into the hinder or inward part of the leg. 2. *Semimembranosus*, arises from the swelling in the ischium, and is inserted into the inner-side of the leg backwards. 3. *Seminervosus*, has the same original and insertion with the former, only in the hinder part is carried a little forwards obliquely, before it terminates at the inside of the leg. 6. *Gracilis*, and *gracilis posticus*, rises from that line where the hip-bone and share-bones join together, and, descending along the inside of the thigh, is inserted into the inner part of the leg. 5. *Rectus gracilis* springs with an acute tendon out of the outward and lower spine of the os ilium, is carried along the thigh, and terminates in the fore-part of the leg. 6. *Vastus externus* borders upon the rectus gracilis, and arises out of the great trochanter, and is inserted into the leg, a little below the patella on the outside. 7. *Vastus internus*, borders as the former on the rectus gracilis, and arises out of the root of the small trochanter, and falls into the inner side of the leg, a little below the patella. 8. *Crureus*, arises out of the thigh bone, between the two trochanters, and, cleaving to the thigh, produces its tendon over the epigonatis, unto the fore-part of the leg ; the four last muscles are inserted all into one tendon, which terminate in the beginning of the leg. 9. *Musculus longus*, it is nearly the longest of all the muscles ; arises from the former spine of the os ilii, and descends obliquely into the inner and fore part of the leg. 10. *Popliteus*, it arises from the lower and exterior tubercle of the thigh, and is inserted four-square into the inner and upper part of the leg, obliquely. 11. *Membranosus fascia lata*, arises from the spine of the os ilii, runs obliquely into the outward part of the leg, and, with a broad and long tendon, invests almost all the muscles of the thigh.

The foot, or instep, has eight muscles. 1. *Tibialis anticus*, it is fastened to the leg, and arises near the fibula, and, cleaving to the tibia all along, it degenerates into a tendon, which beneath the ring-like ligament of the foot is divided into two tendons. 2. *Peroneus anticus*, joined to the peroneus posticus, and has its rise with two heads, one from the middle and external part of the perone or smaller focile; the other from the upper epiphysis of the fibula: these, being carried through the chink of the ancle, terminate in a double tendon, the smaller of which is carried into the bone of the little toe; the greater running obliquely under the sole of the foot. 3. *Gemellus externus*; this has two heads; they both arise from under the ham, the one from the inner, the other from the outward, parts of the end of the thigh-bone, and pass down the back part of the leg, then become tendinous, and, being united, make one strong, broad, and nervous, tendon, which is inserted into the heel. 4. *Gemellus internus*, this with the other constitutes the ancle, and lies under the former, of a livid colour; it arises under the ham, by a strong nervous substance; having passed the middle of the tibia, it becomes narrower and tendinous: it is inserted into the heel. These make the belly or calf of the leg. 5. *Soleus*, it is a broad and thick muscle arising from the upper and hindermore appendix of the fibula, and is inserted by a tendon into the heel. 6. *Tibialis posticus adducens pedem*, it arises from the upper part of the tibia, or greater and smaller focile, and from the ligament which ties them together, runs along the tibia, and through the cleft of the ancle-bone, were it produces two tendons. 7. *Peroneus posticus*, it arises from the upper but hinder part of the small focile, by a nervous and strong beginning, and, cleaving to the outside of the perone, it runs down round and fleshy: it is inserted under the sole of the foot, into the bone set before the great toe. 8. *Plantaris* covers the whole sole of the foot; and, springing from the outer part of the thigh-bone under the ham, by a round and fleshy beginning, passing within the leg, between the gemelli, it goes thence to the sole, and is inserted into the five toes.

The great toe has five muscles. 1. *Primus*, or *flexor pollicis*, arises from the upper part of the fibula, and is inserted into the third joint of the great toe. 2. *Secundus*, or *extensor pollicis*, arises from the middle of the fibula, or from the outside of the tibia, where it is separate from the fibula, creeps along the surface of the foot, and ends in two tendons, the one of which is inserted into the upper side, the other into the lower side, of the great toe. 3. *Tertius pollicis, adductor primus*, that which draws the toe inward, and springs from the ligament which ties the heel-bone and the *taulis*, is fastened inwardly to the bone set before the great toe, and by a round tendon is inserted into the first joint of the same. 4. *Quartus pollicis, adductor secundus*, it arises from the ligament of the first interjuncture of the little toe, then, becoming fleshy,

runs

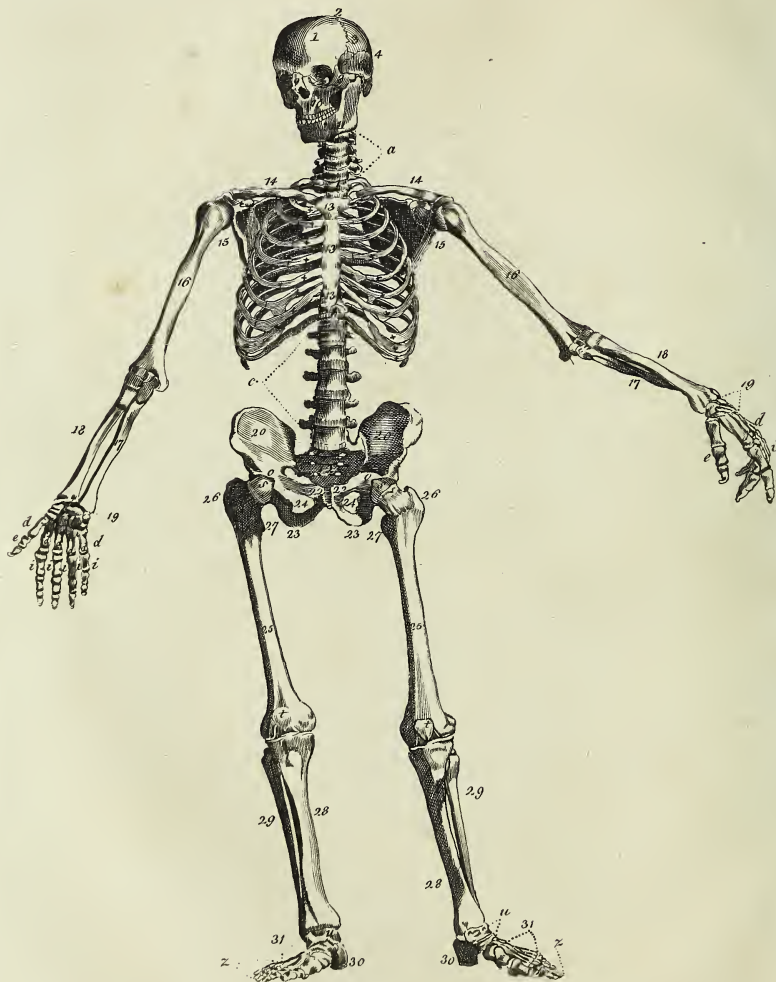
runs over the first joint of the toes, and with a short and broad tendon is inserted a little inwards into the first joint of the great toe. 5. *Quintus pollicis, abductor ejusdem*, it arises fleshy, from the inner part of the heel, and is inserted extrinsically into the first bone of the great toe.

The muscles of the four little toes are eighteen, having tendons comprehended with a circular and transverse ligament, which encompasses them beneath the ancles, just as in the wrist. *Musculus major*, arising from the upper apophysis of the tibia under the ham, by a long and fleshy beginning, passes under the inner ancle, and by the hollowness of the heel goes to the sole of the foot, where it is divided into four tendons, inserted into the third and last joint of the four toes. *Flexor minor*, lies in the midst of the sole of the foot, arising from the inner part of the heel-bone, and is divided into four round tendons, which are carried and inserted into the second articulation of the four toes. *Extensor longus*, arises with a nervous and short beginning from the upper appendix of the tibia, and, cleaving to the ligament which unites the fociis, runs down to the foot, passing first under the transverse ligament; then, being divided into four tendons, they are inserted into the second and third joints of the four toes. *Extensor brevis*, lies under the former, arises from the transverse ligament, fleshy and broad, and is by four tendons inserted into the first joints of the four toes. *Lumbricales quatuor*, they arise from the tendons of the perforans, small and round, and are inserted by so many small tendons into the sides of the first joints of the four toes. *Interossei decem*, they arise from the bones of the pedium, and are placed between the bones of the foot, filling the void spaces of the metapodium, being ten in number, five external and five internal. They arise by the sides of the bones of the instep, the former to the first interjoinings: the ninth of the interossei, is the abductor of the great toe: the tenth and last is the special abductor of the little toe.

As to the number of the muscles in the human body, authors are strangely disagreed about it: however they are certainly more than five hundred; the principal ones whereof are represented in the two annexed plates; those conspicuous in the fore-part of the human body being expressed in plate I. where 1. 1. are the frontalis muscles; 2. 2. the orbiculares palpebrarum; 3. the attollens auriculam; 4. the temporalis; 5. the masseter; 6. represents the muscle called constrictor, or depressor pinnæ narium; 7. the dilatator alæ nasi; 8. the zygomaticus; 9. the place of the elevator labiorum communis, called by Lancisi, gracilis; 10. the elevator labii superioris proprius; 11. 11. the constrictor, or sphincter labiorum, or orbicularis labiorum; by some called oculatorius; 12. the buccinator; 13. 13. the muscoli mastoidei; 14. 14. the sternohyoidei; 15. 15. those parts of the muscles which arise

from the clavicle; 16. 16. the caracohyoidei; 17. the scaleni; 18. represents part of the cucullaris on the right side; 18. on the left side, is the levator, or elevator scapulæ, otherwise called musculus patientiæ; 19. 19. the place where the fibres of the pectoralis unite in some measure with those of the deltoides; 20. 20. the deltoides; 21. the place in the carpus where the palmaris longus passes through a ring in the annular ligament; 22. a remarkable union of the tendons of the extensors of the three last fingers; 23. 23. the productions of the peritonæum, which, perforating the muscles of the abdomen at the rings, descend to the scrotum; 24. 24. the place where the three tendons of the sartorius, gracilis, and feminovosus, are inserted into the interior part of the tibia, just under the knee; 25. 25. the tendons of the extensors of the toes, which are secured by a ligament at the ankle, as appears on both sides; but on the right side, internally, another ligament is represented, which fixes the tendons of the extensor longus digitorum, the tibialis posticus, and the flexor pollicis; 26. 26. the musculus pectoralis; 27. the triceps extensor cubiti on the right side; 28. and 30. the biceps on the left side, according to Lancisi's explanation; 29. part of the triceps extensor on the left side; 30. the biceps on the right side; 31. the brachialis internus; 32. the anconæus; 33. the pre-nator rotundus; 34. 34. the supinator longus; 35. 35. the radius externus, according to Lancisi; 36. the extensor carpi ulnaris; 37. 37. the cubitæus internus according to Lancisi; 38. the radius internus according to Lancisi; 39. the palmaris with its tendinous expansion; 40. 40. the tendons of the muscles of the thumb; 41. the tendon of the adductor pollicis; 42. the extensor magnus digitorum; 43. ligamentum carpi; 44. 44. the tendons of the iliaci interni; 45. the pectinæus; 46. one of the heads of the triceps; 47. 47. the rectus femoris on each side; 48. 48. the vastus externus on each side; 49. 49. the vastus internus on each side; 50. the gracilis; 51. the feminovosus; 52. the sartorius on each side; 53. a part of the origin of the vastus externus; 54. 54. the membranofus; 55. the tibialis anticus; 56. the gemelli; 57. 57. the solæi; 58. the tendon Achillis; 59. according to Lancisi, is the extensor digitorum longus; 60. the tendons of the extensors of the toes; 61. the tendons of the extensor longus, tibialis posticus, and flexor pollicis: A. A. portions of the latissimus dorsi on each side; B. B. the indentations of the ferratus major anticus; C. C. the sternum.

The second plate represents the muscles of the back part of the human body; where 1. 1. express the two muscles upon the occiput, called by Eustachius, quadrati; 2. the musculus cucullaris; 3. the splenius; 4. the musculus mastoideus; 5. the musculus patientiæ, or levator scapulæ proprius; 6. the rhomboides; 7. the articulation of the clavicle with the scapula on the right side; 8. the deltoides; 9. the teres minor; 10. the teres major; 11. 11. the latissimus dorsi on each side; 12. the glutæus major; 13. the glutæus



The Bones, or Human Skeleton.

glutæus medius; 14. the musculus pyriformis; 15. the quadratus femoris; 16. the biceps femoris; 17. the semimembranofus; 18. the membranofus according to Lancisi; 19. 19. the vafi externi; 20. the gæstrocnemii; 21. the soleus; 22. the plantaris.

OF THE BONES, OR HUMAN SKELETON.

A BONE is a fimilar, spermatic, part, cold and dry, endowed with hardnefs, strength, and solidity, that it might give force to the body, fustain it, and help its motion. Its substance is naturally hard and folid, covered with a membrane, called *periostion*, white, with fome rednefs; hollow in the middle, (except the ribs, &c.) fmooth; covered in its extremities with a cartilage, and moistened with a fat humour, called *medulla*, or marrow. Some bones are perfectly generated in the womb, as thofe in the ear, being the fmalleft in the whole body; they are nourifhed by arterial blood, as may appear in the bones of young animals, whofe marrow is yet bloody, as alfo by blood contained in the marrow: but the proximate and immediate nutriment of hollow bones, is the marrow; but of bones not hollowed, thick blood fent in through the pores. The proper matter therefore of a bone is feed, which confifts of humours and fpirits. The efficient caufe is the *vis offifica*, or an innate faculty, acting by the affiftance of heat.

The bones are joined together, either by *symphyfis*, for firmnefs, and union; or by *artrofis*, articulation or jointing. Natural union, or growing together, is when the connection or joining of bones is without motion: and this is with, or without, a medium. *Symphyfis* without a medium is three-fold, viz. by *futura*, *harmonia*, and *gomphofis*. *Sutura*, a future, is the joining of bones by indenture, as if the teeth of two faws were thruft one into another, as in the bones of the *cranium* or skull. *Harmonia*, is the joining of bones by a fingle line, whether ftraight, oblique, or circular, as in the bones of the nofe and upper jaw, and fo all *epiphyfes* in a manner are joined. *Gomphofis*, or nailing, when one bone is faftened into another, as a nail in a poft, fo the teeth are faftened in the jaw bones.

The whole ftructure of the bones of the head is called *cranium*, the skull, becaufe it is as it were an helmet; it is alfo called *calva* and *calvaria*: its fubftance is boney, to fecure the brain; but, in new-born children, it is fofter than ordinary.

The bones of the head are either proper or common; the proper are in number fix: *os frontis*; 2. 3. *offa fincipitis*; 4. *occipitis*; 5. 6. *offa temporum*. The common bones are only two in number: *os fphænoïdes*, and *os etbmoides*. *Os frontis*, the forehead bone, called alfo *coronale*, is bounded before by the coronal and firft common future, and in the fides by the temporal bones; it is but one in thofe of ripe age, but in children it is double, being divided by a future paffing from the coronal to

the nose ; it also has a two-fold table, an internal and an external : on each side of this bone, above the eye-brows, there are large cavities, commonly two in number, between the two tables, clothed sometimes with a green membrane, and containing a soft, clammy, and marrowish, substance ; from whence two holes pass into the wide spaces of the nostrils ; and another, which ends into the skull above the *septum* of the *os ethmoides*, to distinguish the organs of smelling.

Offa sincipitis, the bones of the fore-part of the head : these cover the moistest part of the brain, are in shape four-square and unequal, and of a more rare or spongy substance than the other bones, whence the wounds of the *sinciput* are deadly : they are joined before with the bones of the forehead, with the *coronal suture* ; to the *os occipitis*, by the *lambdoide suture* ; and to the *offa temporum*, by the *sutura squamosa* : without they are smooth, but within unequal, by reason of the prints which the jugular veins of the *dura mater* leave behind them.

Os occipitis, the bone of the hinder part of the head, constitutes almost all the hinder part of the skull ; and is in children three or four bones, but in grown persons but one. Its form is that of a spherical triangle, and is joined to the crown-bones by the *suture lambdoides*. It is the thickest and most compact of all bones of the head, chiefly at the basis of the skull ; (because there the noble ventricle is seated, and from thence the nerves arise as from a fountain,) but at the edges it is the thinnest of all. It is smooth without, but within it has many sinuosities to receive the meninges safely. It has five holes, through the greatest whereof the *spinalis medulla* passes to the back-bone. The smaller serve for the going forth of the nerves, and entrance of veins and arteries. It has nine cavities, seven within and two without : and two broad processes at the basis, covered with a gristle, which is more eminent, and inserted into the cavities of the first *vertebra* for the motion of the head ; as also another small process behind joined to the first *vertebra*. *Offa temporum*, the bones of the temple. Their form is uneven, almost circular, because of their various substance, which is like rocks and craggy cliffs, for which cause they are also called *offa petrosa*, the stoney or rocky bones. In their upper part they are attenuated like a scale, so as to be transparent, and are joined to the bones of the *sinciput* like scales ; before they are joined to the first bone of the upper jaw, by its first process : and to the *os occipitis*, by the bastard suture : they have six holes without, two within : the first external hole is large, viz. the auditory passage, the other five are small for vessels to pass through. They have two cavities, an outer, covered with a gristle, which receives the lower jaw-bone ; and an inner, which is rather long, and common to the *os occipitis*. The *auricularis* is internal, with a long protuberancy, wherein there is a three-fold cavity, viz. the drum, the labyrinth, and the cochlea.

The

The *tympanum*, or *drum*, called also *pelvis*, which contains the internal or inbred air, and the four bones, called *malleolus*, *incus*, *stapes*, and *orbiculare*; as also a ligament, two *fenestrae*, or windows, (which are little holes in the cavity,) and a water passage; from this cavity goes a channel into the palate of the mouth. The *labyrinthus*, called also *fodina*, is a cavity full of crooked and manifold turnings; the entrance hereinto is the *oval fenestra*, and joins itself to the following cavity; it has four holes besides the oval, and a fifth, which is terminated in the *cocblea* or third cavity. The *cocblea* has three or four windings, (with a wreathed or snail-like figure,) the windings mutually receiving one another: those that are thick of hearing have only one or two of those windings; this cavity is cloathed with an exceeding thin and soft membrane, and adorned with multitudes of little veins, which turn themselves about the wreathings of the *cocblea*, and by many branches creep into the secret turnings of the *labyrinth*.

Os sphænoides, or the wedge-fashioned bone, because it is seated as a wedge in the middle of the bones of the skull; at the sides it goes along with the *os petrosum*, from whence it is separated by a rough chink; above it touches the first, fourth, and sixth, bones, of the upper jaw; below it touches the bones of the palate of the mouth, and is placed under the brain, as a foundation, so that it touches almost all the bones of the head and upper jaw: in children it is made of four bones, but in grown persons it is but one. It is solid, and the thickest of all the bones of the head, where it makes the basis of the skull. In the external table are two remarkable *apophyses*, near the sides of the holes of the nose, formed like the wings of a bat. In the internal table are four little processes, in shape of a Turkish saddle, called *sella Turcica*, full of little holes, whose uses are to elaborate the in-breathed air, to make spirits, and to pass out *pituinous* excrements through the funnel, out of the ventricles of the brain. It has sundry perforations, by which the optic and motory nerves of the eye, and other nerves for the motion of other parts, as also veins and arteries for nourishment, pass.

Os ethmoides, the sponge or sieve-fashioned bone, having in it many holes, (by which smells pass to the brain,) especially in the inner side of it, where it joins the head, and this part is properly called *cribrosa*: from this within the skull arises a sharp *apophysis*, resembling a cock's-comb, by which the *ethmoides* is divided into two parts; from this process is opposed another, without the nostrils, and distinguishing them, called the divider of the nostrils, as also *septum nasi*. The chief use of the *ethmoides* is to alter the air drawn in with smells, that the species of odours may, with the air, be carried to the organs of smelling, which end in these holes; and therefore in a *coryza*, this bone being obstructed, the smelling is lost: also here-

by the brain is purged, for phlegm is not only evacuated by the glandula pituitaria into the palate, but also by the os cribrosum into the nostrils.

The bones of the upper jaw are in number eleven, five on either side, and one without a fellow: first pair, *ossa zygomatica*, the yoke-bones, is in a manner triangular, and constitutes the greatest part of the os zygomatis or jugale, and a great part of the orbita and outward angles of the eye, on the lower side. Second pair, *os lacrymale*, is a round, little, and thin, bone, in the inner corner of the eye: by this a branch of the fifth pair of nerves of the brain pass to the inner membrane of the nose. Third pair, *os maxillare*, the cheek-bone, the greatest and thickest of them all; it contains all the upper teeth, and makes up the holes of the nose, and most of those bones which belong to the upper part of the face: it has large cavities on both sides very remarkable, both that it might be less ponderous, and that it might contain marrow to nourish the bones and upper teeth. Fourth pair, *os nasi*, the bone that constitutes the external and prominent boney part of the nose; it is thin, hard, solid, and quadrangular: these two bones are joined with a suture; within they are rough, that the gristles of the nose may be the better fastened. Fifth pair, *os palati*, seated at the end of the palate, where the holes of the nostrils go into the fauces or throat; they are thin, solid, and broad, and constitute the hinder part of the cavity of the palate and nostrils. Sixth, *vomer*, the bone without a fellow, like a plough; it is the inmost and middlemost under the sphœnoides, and above the palate: it holds up the bridge of the nose like a partition wall, to which it is joined by the suture, harmonia. Six bones constitute the orbit of the eye, 1. the *frontale*, which makes the upper vaulted part: 2. *zygomaticum*, that on the outside, where the smaller corner is, and a portion of the os sphœnoides: 3. another on the outside, concurring with the former part of the os sphœnoides: 4. *maxillare*, and 5. *lacrymale*, which constitute the inner part: 6. the scaly table of the *os ethmoides*, which makes up the lower side, all united partly by common, partly by proper, sutures.

In children, till about seven years of age, the lower jaw consists of two bones, which are joined together by *synchondroosis*; but in grown persons it is but one. The arched part of this bone is the chin; at each end of the shanks are two processes, whereof one is sharp, called *corone*, going forward, into which the tendon of the temporal muscle is implanted; the other *articularis*, because it serves for articulation with the temple bones, which articulation is covered with a common membranous ligament. Its substance is exceeding hard and strong, that it may hold out in biting and chewing; within it, there is a long cavity, where marrow is contained to nourish the teeth, and by which a branch of our fifth pair of nerves of the brain runs unto the roots of the teeth with a little vein and artery: this cavity goes quite through the jaw-bone like a pipe, so that a copper wire, put in at one end, will

will come out at the other. It is movable, and contains sockets for the teeth; and in old age, when the teeth fall out, the sockets draw together, and become sharp.

The teeth are bones properly so called, white, smooth, hard, and solid, being indeed harder than other bones, that they might bite and chew hard things, not much inferior in hardness to stones. They are naked, without any periostion, yet endowed with a kind of sense, as may be perceived by cold drink, or when set on edge; which sense is lodged in the inner, softer, and more nervous, part. They receive into their cavities nerves, which other bones do not, and by which they are tied to the mandible with a sinneurosis. The teeth continually grow, all a man's life, because they are daily worn by biting and grinding. The cavities of the teeth are clothed with a little membrane of exquisite sense, whence it is that pains of the teeth are so exceeding vehement: they have five little nerves from our first pair, which are spread abroad within, and by small twigs mixed with the mucilaginous substance in the middle of the teeth; as also little arteries to give natural heat and nourishment, and little veins to carry back the blood after nutrition.

The tongue-bones are seated under the lower jaw, and in the uppermost part of the larynx. They are commonly accounted but one bone, though made up of three. The use of these bones is to keep the throat open, both for the passage of the food, and for receiving in of air in speaking or breathing.

The bones of the ears are the least of all, being the bones subservient to hearing; and are four on each side. They are all placed in the first cavity; their substance is hard and dense, but hollow within, that they might be lighter, and contain marrow for their nourishment; they are as big in new-born babes as in men, but not so hard. The principal of these bones are called *malleus*, the hammer; *incus*, the anvil; *stapes*, the stirrup; and *os orbiculare*, which is round and small, joined by a small ligament to the stirrup side, where it is joined to the anvil. The uses of these bones are to serve the sense of hearing, and to make a passage for the excrements of the ears: for the stirrup, shutting the oval, is moved by the anvil, and the anvil being smitten by the hammer, and the hammer by the membrane of the drum, through the impulse of the external air, the membrane of the drum is in the mean while driven inwards, whereby the inbred air is affected, which, passing through the cochlea, causes the branches of the auditory nerve to receive the species of sounds, and to communicate the same to the brain.

The bones of the neck, and the whole vertebræ of the back, from the cranium or skull to the os coccygis or crupper-bone, are termed *spina*, the thorn, because the hinder part of it is sharp-pointed like a thorn-branch. The parts of the spine are called *vertebræ*, whirl-bones, because by their means the body is turned several ways.

All these vertebræ are hollowed to contain the spinal marrow; they are many, for the conveniency of motion. The figure is sometimes inclining inwards, as the vertebræ of the neck, to sustain the gullet; and *aspera arteria*; and the vertebræ of the loins, to uphold the trunks of the aorta, and cava descending: sometimes outwards, as the vertebræ of the back, and a little of the *os sacrum*, that there may be a larger space for the heart, lungs, bladder, anus, womb, &c. The figure of each vertebræ, above and below, is plain and broad, that luxation may not easily be made: round within, convex, and bunching out; but in the neck broader, and more even.

The *vertebræ* of the back are in number twelve, to which as many ribs answer. These vertebræ are round on the fore-part, but behind somewhat hollow. They are thicker than those of the neck, less solid, and full of little holes for the passage of the nourishing vessels.

The *vertebræ* of the loins are five in number; and belong to the abdomen or lower belly: they are thicker and greater than those of the breast, because they uphold them, and the lowermost are biggest. Their figure is long and semi-circular; their substance spongy, and full of holes to give passage to the veins; their connection is looser than that of the back, that we might the more easily stoop to the ground.

The *os sacrum* is broad and immovable, being the basis or foundation of the back, upholding the whole frame of the vertebræ. In infants it is commonly composed of six bones united by a cartilage, but in men of ripe years it seems but one bone, at the first view, yet, being boiled a long time in oil, it is divided for the most part into six several vertebræ; for each of them has a body, and processes, and has a large hole to receive the *spinalis medulla*. But in this they differ from the other vertebræ, because in those the lower part is the bigger, but in these the smaller; wherefore, the uppermost is the biggest, and the lowest the least. Its figure is almost triangular: in its fore-part hollow, smooth, and even; in its hinder-part, bunching and rough, with little holes to send out nerves.

The *os coccygis*, the crupper or rump-bone, is under the former, consisting of three bones and two gristles, and is called *os coccygis*, the cuckoo's bill, from the likeness thereof. It is joined by a cartilage; for the first bone of it has a small hollowness which receives the last vertebræ of the *os sacrum*. Of these three bones, the lower is still the smaller: and in men, they are bent inwards to stay the great gut, and the sphincter muscle which are tied to it: but in women they bend outward to give way to the womb in the time of travail. These bones are of a spongy and soft substance, and have neither process nor any hollowness. Their union with the *os sacrum* is loose, to give way for the exclusion of large excrements; for otherwise a luxation

luxation might happen, causing exceeding great pains; as in hard labour it now sometimes happens.

The *os innominatum*, the hoop-bone, or flank-bone, consists of three bones, viz. *os ilium*, *os ischion*, and *os pubis*, all which are joined together by gristles till about the seventh year: afterwards, especially in those of ripe years, the cartilages being dried, they seem to be but one bone. These three bones, together with the *os sacrum*, make that cavity which is called *pelvis*, the basin or bowl, which is bigger in a woman than in a man, that the womb of a woman with child may the better rest upon it. In hard labour the share-bone, or *os pubis*, and the *os sacrum*, will part, the cartilages and ligaments (being bedewed with superfluous humidity) giving way. 1. *Os ilium*, the huckle-bone, so called because it contains the gut ilium, is the first part, the highest, the broadest, and the greatest, in figure semi-circular, arched without and hollow within: the semi-circle is called *spina*, the arched part *dorsum*, and the hollow part *costa*. 2. *Os pubis*, the share-bone, is seated in the fore-part; and is parted in the middle by a cartilage not very hard: it is joined to the bone of the other side by syncondrosis, which in women is twice as thick and as wide as in men, that these bones in child-bearing may not be luxated or disjoined, but only loosened and made wide for the coming forth of the child. 3. *Os ischion*, the hip-bone, is the lower and more outward part, wherein is a large and deep cavity, called *acetabulum*, the saucer, or *pixis*, the box, which receives the large head of the thigh-bone: the cartilaginous process of this cavity is called *supercillum*, the brow. The *coxendix* is placed between the huckle and share-bones, and is knit to the *os sacrum* by a double ligament; the one is inserted into the sharp process of the hip; the other behind, into its appendix, that the intestinum rectum and its muscles may be sustained.

The *costæ*, or ribs, in figure resemble a bow, or segment of a circle; their original from the vertebra is narrower and rounder, growing broader as they come to the breast: in their upper sides they are blunt and thick; in their under part sharp and thin: the uppermost ribs are more crooked and shorter, the middlemost are longer and broader; the lower are cut again shorter. Their substance is partly cartilaginous, and partly boney, the boney part being towards the *vertebræ*; where they are furnished with two little apophyses or knobs: the first of which is articulated with the hollow of the *vertebræ*: the second is joined to the transverse process of the *vertebræ*: but the five lower ribs by a simple knob. The number of the ribs are twelve on each side: seldom thirteen, more rarely eleven: and, when they are so found, you may account their numbers either supernumerary or deficient. They are two-fold, viz. either legitimate and true, or illegitimate and false. The true or legitimate are the seven upper ribs, because they touch the breast-bone by their length, and make

as it were a circle: they also make a perfect articulation with the breast-bone. The illegitimate or bastard ribs are the five lower ribs, which are shorter, smaller, and softer, not reaching to the breast-bone: they are semi-circular and arched without, hollow within: they terminate into longer gristles than the true ribs, which, being turned back upwards, stick one to another, the last excepted, which is the least, and sticks to none. The eleventh rib, and sometimes the twelfth, are tied to the septum transversum; and sometimes the last grows to the oblique descendent muscles of the belly, without the midriff; or has the circumscription of its proper muscle. The use of the ribs is to defend the breast, and the heart, lungs, and other bowels, therein contained; as also to help the motion of the breast and parts adjacent, in sustaining the muscles and fleshy parts thereof.

The *sternum*, or breast-bone, is placed upon the fore-part of the chest, and rests upon the ribs: its substance is partly boney, but spongy and red; partly gristly; its figure is convex, broad, and long. It is composed of three bones, as may be seen in young people; but in old men it commonly appears but one: they are distinguished by transverse lines, and are knit together by synchondrosis, for gristles are interposed like ligaments. Under this is the pit of the stomach, where the upper and left orifice is, called *scrobiculus cordis*. The use of the sternum is, first, to defend the heart (like a shield) from outward dangers: secondly, to uphold the mediastinum: thirdly, to collect and fasten the ribs.

The collar-bones, being in number two, are called *claviculae*, keys, because they shut up the breast or thorax; and as it were lock the scapula, or shoulder-blades, to the sternum. They are situated cross-wise, under the lower part of the neck, on the top of the thorax on each side: externally, they are convex, on the inside a little concave: their substance is thick, but fistulous and spongy, and therefore easily broken; their superficies are rough and uneven. Their use is to assist in the various motions of the arms; as also to uphold the shoulder-blades, that they should not fall upon the breast, together with the shoulder-bone; moreover the bone of the arm rests upon this bone, as upon a prop, that it may be the more easily moved upwards and backwards. Hence brutes have no collar-bone, the ape, squirrel, hedge-hog, and mouse, excepted.

The shoulder-blade is a broad and thin bone, resting upon the upper ribs behind, like a shield. Its substance is hard and solid; its figure almost triangular, the outside somewhat arched, but the inside hollow; it has also a spine or sharp point, looking both above and beneath the cavities, called *interscapulia*. In the inside of this bone, about the middle, there is a hole, by which a vein doth pass for its nourishment. It has five epiphyses, three at the inside, and two at the basis: it has

also

also ligaments, which join its head to the *humerus* and the *acromion*, or shoulder to the *clavicula* : and common, thin, and membranous, ligaments, which compass the joint of the shoulder blade and arm. Its uses are, 1. to strengthen the ribs : 2. for the articulation of the *humerus* and *clavicula* : 3. for the inflection of the muscles : 4. to cover the heart, and defend the back from being hurt.

Os brachii, or bone of the arm, called also the shoulder-bone, is but one, great, strong, long, roundish, and uneven. Its substance is hard and solid ; it is hollow all along within, containing marrow, but at the two ends more broad, and a little spongy. In its upper part it has an appendix, *epiphysis*, or great head, growing to it ; which is round, covered with a gristle, and articulated with the *scapula* or *diarthrosis*. In the top of it is also a long chink, through which the nervous head of the *musculus biceps* doth pass. The longer part is articulated to the *ulna* and *radius*, where there are two *apophyses* ; an external, which is less, and crufted with a gristle ; and an internal, having two cavities, representing a pulley, with which the cubit is joined by *ginglymus*, so that it may be bent to a most acute angle, but not extended beyond a right line.

The bones of the cubit, or elbow, are two : the smaller above, called *radius*, and a larger below, called *ulna*. They are shorter than the shoulder, have *epiphyses* on either side, and, resting mutually one upon another, are joined by a membranous ligament : above, the *ulna* receives the *radius* ; but below, the *radius* receives it. Their substance is firm and solid, they are long, and contain a marrowy substance ; but their surface is somewhat rough, by reason of the lines appointed for the muscles.

Carpus, the wrist, hath eight distinct bones, all of them unequal, and differing in shape and magnitude. At first they are gristles, afterwards spongy bones, covered with very strong gristly ligaments, which fasten them together as if they were but one bone : these ligaments, arising from the lower processes of the *ulna* and *radius*, serve for articulation : but there are angular or ring-shaped ligaments, which are transverse, and compass the wrist, to comprehend, strengthen, and safely carry, the tendons, which pass through the *carpus* ; these are many, though they seem to be but one ligament, the internal comprehend the tendons of the muscles which bend the fingers ; the external, the tendons of the muscles which extend them.

The *metacarpus*, or palm of the hand, has four bones, of a hard and solid substance, and hollow, containing marrow ; they are round, and bigger than those of the fingers ; that which answers to the fore-finger is biggest, and so still the lowermost are smaller. Between each bone a distance is left for the *musculi interossei* of the fingers : and in the palm there is a transverse ligament, which ties the bones of

the fingers to the *metacarpium*. Above and beneath they have *epiphyfes* : by the upper, they are joined to the *carpus*, or wrist ; by the lower, they enter into the hollows of the fingers.

The bones of the fingers are in number fifteen, each of them having three bones, and answering the bones of the *metacarpus*, the thumb excepted. The thumb has no connection with the bones of the *metacarpium*, because it is articulate with the wrist, with a manifest motion ; whereas the bones of the palm are joined to the wrist without manifest motion ; as also because the upper of the thumb is shorter than the bones of the *metacarpium*, and not answerable to them. Each finger has ligaments on their insides, according to their length, like channels, whereby they are fastened one to another.

The thigh has but one bone, which is the greatest and longest in the whole body. In its superior extremity, the head is round, to which a slender part is added, called the neck ; from the neck are two *apophyses* produced, to which the muscles, called *rotatores*, are fastened, and therefore they are called *trochanter*s. The lower part of the thigh has two low prominences or heads, called *condyli*, a cavity being left between of a thumb's breadth, through which the vessels pass, with a nerve of the fourth pair, which cavity also admits the middle and eminent *apophysis* of the *tibia* or leg : in like manner the *condyli* are received by the cavities of the leg, by a loose articulation, called *ginglymus* : the inner of these heads is more thick, the outer more broad and flat. The upper part of this articulation is called the knee, the hindermost the ham.

The *patella*, or knee-pan, is somewhat round, about two inches broad, plain, without having many holes, but within bunched, and there covered with a cartilage : its substance in young children is cartilaginous, but in grown persons boney ; its figure is almost like a buckler or shield ; its situation is upon the jointing of the thigh and leg, where the knee is compassed with a membranous ligament, the *patella* excepted. It grows to, and is fastened by, certain thick tendons of some muscles of the thigh ; as the second, third, and fourth, muscles, which extend the *tibia*, and pass by the knee to it, and are inserted into the fore-knob of it : its use is taken from its situation, being set before the thigh-bone and *tibia*, to strengthen the articulation, lest the thigh-bone, in going down any hill, should slip out forwards ; as also to defend the tendons of the muscles.

The shank, or leg, is composed of two bones ; the one, being the inner and the greater, is called *tibia* ; the other *fibula*. *Tibia*, the shank-bone, has in its upper part a process in the middle, which is received by the cavity of the thigh-bone. It is joined to the thigh-bone by *ginglymus* : the *fibula* only cleaves to the *tibia*, and touches

touches not the thigh-bone. In the lower part there is an apophysis void of flesh, sticking out with a bunch near the foot, which is called malleolus internus, the inner ancle-bone; as the process of the fibula is called malleolus externus, the outward ancle-bone. *Fibula*, the button, (because it seems to button together the muscles of the shank,) which is also called fura, the calf; is a firm bone, being drawn along before the tibia without, as the radius before the cubit. The upper end with its round head subsists beneath the knee; but, with its hollowness, it receives the lateral knob, which is under the epiphysis in the upper end of the tibia. In the middle there is a distance between the tibia and fibula, in which space, is a thin broad ligament, joining these bones in longitude, and where also the muscles of the feet are placed.

The bones of the *tarsus*, or instep, are seven. *Astragalos*, the game-bone, to which are joined the great and small foci. *Pterna*, the spur of the foot, or heel-bone, into which the greatest and strongest chord or tendon in the whole body is inserted. *Os naviculare*, from its likeness to a boat; it is long, bunched without, and hollow within, and covered with a cartilage: *Os tesserae*, or die-shaped bone, because it hath six sides; it is greater than the rest, and placed before the heel, joined to the fourth and fifth bone of the metatarsus: in the hinder with the heel-bone: the other sides are joined to no bones. *Cuneiformia*, *calcoidea*, the wedge-like bones, or bones of the foot, and are articulated with the scaphoides, or os naviculare: being joined, they represent a vault: for above they are convex, beneath hollow, to receive the tendons and muscles.

The *metatarsus*, or sole of the foot, has five bones, which are solid without, hollow within, longer than the bones of the back of the hand, and knit to the bones of the tarsus. That which stays the great toe is the thickest, that which stays the next toe is the longest, the next is shorter, and the rest each shorter in order. The lower end of that which stays the great toe, is received by the cuneiforme majus: the second by the cuneiforme minus: the third, by the third wedge-like bone: the other two, by the two tops of the os cubiforme.

The bones of the toes are in number fourteen: the great toe has only two, the rest three apiece. They are solid without, hollow within; and have three joints and two processes, answering in all things to the bones of the hand. The lowermost joints have two knobs, received by the ends of the middlemost joints, but the uppermost receiveth: the uppermost joints have also a deeper hollowness, because they receive the ends of the bones of the foot.

1. There are certain little bones called *sesamina* or *sesamoidea*, being almost like seeds, both in form and magnitude, being for the most part in number fifty-eight. They

They are round and a little flat, and less in the feet than in the hands, excepting those in the great toe. 2. They are most commonly twelve in each hand, or twenty-four in both hands, and so many in each foot. They grow to the tendons of the muscles which move the fingers and toes, under which they lie, wrapped up in the ligaments, and come away in cleansing the bones, unless great care be used. The uses of these *sesamoidæan* bones are to defend the tendons; to strengthen the joints, and preserve them from luxation.

The annexed plate demonstrates the skeleton, or bones, of the human body, which consists of 239, exclusive of the *sesamoidæans*, *os hyoides*, and bones of the ears; which, being added would make the total number 308.

Os frontis, or frontal bone: 2. futura coronalis, or coronal future: 3. vertex ^{after}: 4. sutura squamosa: 5. processus ossis sphenoides: 6. os temporis, or temporal bone: 7. processus mastoideus: 8. os mali: 9. ossa nasi, or bones of the nose: 10. 11. the superior and inferior maxillary bones: *a.* vertebræ of the neck: *b.* vertebræ of the back: *c.* vertebræ of the loins: 12. os sacrum: 13. the sternum, or breast-bone: +. the costæ: 14. the clavicula, or clavicles: 15. the scapula: 16. the humerus, or arm-bones: 17. the ulna: 18. the radius: 19. the carpus, or wrist: *d.* the metacarpus: *e.* the pollex: *i.* ossa digitorum manus: 20. the os ilium: *o.* the os ischium: 22. the os pubis: 23. tuber ischii: 24. foramen magnum: 25. os femoris: *r.* collum ossis femoris: *s.* caput ossis femoris: 26. the trochanter major: 27. the trochanter minor: *t.* the patella: 28. the tibia: 29. the fibula: *u.* the talus: 30. the calcaneus: 31. the metatarsus: *x.* ossa digitorum pedes.

OF THE ABDOMEN, OR BELLY IN GENERAL.

THE abdomen is all that part, distinguished within (by the midriff) from the chest to the *os pubis*. It is bounded by the *cartilago mucronata*, *vertebræ* of the loins, *os sacrum*, hip bones, *os pubis*, and the bastard ribs on either side. It is divided into three regions or parts: first, the uppermost, called *epigastrium*, each side of which is called *hypochondrium*, lying under the gristles of the short ribs: it is bounded between the *cartilago mucronata*: secondly, the middle part, called *regio umbilicalis*, which extends from three inches above the navel to three inches below it: the lower part, called *hypogastrium*; the lateral parts are called *inguina*, the groins; in the right sides of which, are parts of the *colon* and *cæcum*, which are tied together; in the left, a great part of the *colon* and *intestinum rectum*; the fore-part of it is called *aqualiculus*, and the lowest part, which is covered with hair, is called *pubes*, the share; the hair begins to appear here in girls about the twelfth year, but in boys about the fourteenth year, of age. Under this region in women are contained the bladder, matrix, and *intestinum rectum*.

The *peritonæum*, is so called from stretching and spreading about, being drawn over all the parts between the midriff and thighs. Its original is from the first formation, at the third *vertebra* of the loins, where it is thicker, so that it cannot, in that place, be separated without breaking. The muscles of the belly being taken away, the *peritonæum* comes to view: it is tied above to the midriff; below to the share and flank bones; in the fore-part firmly to the transverse muscles, but chiefly to their tendons about the *linea alba*, behind to the fleshy heads of these muscles. It is spermatical, cold and dry by nature, and of a substance not simple and uniform, but double, and unequal in thickness. It is a membrane double in all places, but it is most apparent about the *vertebræ* of the loins, where, between the duplications, lie the *vena cava*, the *aorta*, and the kidneys. Its use is to send connections to all the parts to bestow coats upon all the bowels of the abdomen; to give a covering to the diaphragm, liver, and spleen; to produce the ligament which upholds the liver; to make a communion with all the principal parts by veins, arteries, and nerves; to produce the omentum; and, by its reduplication, the mesentery.

The *omentum*, or caul, so called, because it floats or swims upon the guts: it lies under the *peritonæum*, and is situated at the liver, spleen, and bottom of the stomach: in some it ceases at the navel, in others it falls below the navel, and sometimes it reaches to the *os pubis*, where it is inserted. It is a thin membrane, endowed with much fat, double, and disjointed. In men, when it descends into the scrotum, it causes the rupture *epiplocele*, which happens most commonly on the left side, because it is extended rather to the left than to the right side. Its substance is membranous, that it might admit dilatation and extension; it is compact, to hinder the dissipation of the internal heat, and to repel the external cold: it is tied to the stomach, being a middle part between the *colon* and the spleen. Its uses are to cherish and strengthen the internal heat of the stomach and intestines; to give nourishment to the parts in time of famine; to contain the humours flowing from the intestines, which the *glandulus* cannot receive wholly at one time; to prop up the branches of the veins and arteries of the stomach, *duodenum*, *colon*, and spleen; and to generate the fat.

The stomach, called *ventriculus*, from its cavity, is situated in the *epigastrium*, a place encompassed with no bones, that it might stretch the more easily, immediately under the midriff, which it toucheth, so that, if it be too full, it causeth a difficulty of breathing, by hindering the motion of it. In the fore-part and on the right side, it is covered with the hollow of the liver; in the left by the spleen; so that the stomach is as it were between two fires, bending a little towards the left *hypochondrium*, and towards the back part it leans on the *aorta*, the *cava*, and the *pancreas*, which helps its heat. It is less in women than in men, to give way to the distension of the

matrix, and it is composed of three tunicles ; the outwardmost is common from the *peritoneum*, and is the thickest ; the middlemost is proper to itself, and fleshy ; the innermost is from the *dura meninx*, and wrinkled, as also hairy like a piece of silk : this is continued with the tunicle of the *œsophagus*, mouth, and lips, that nothing may be received in which is ungrateful to the stomach : hence it is that, when choler is in the stomach, the tongue is bitter and yellow. It is spongy, and has passages like short fibres, from this inner surface to the outward, that the thinner *chylus* may be the better detained. The inmost coat serves chiefly for sense ; the middlemost for the office of motion ; and the third, that it might be as a covering for the whole. The stomach has two orifices, and both of them in the upper region thereof ; the left is called *os stomachi*, the right the *pylorus*, or porter : the *os stomachi*, or left orifice, has orbicular fibres, that, the meat and drink being once received within the capacity of the stomach, it may, by a natural instinct, exactly shut up the mouth of the stomach, lest the fumes and heat should break out, which might not only go into the brain and breed diseases there, but also hinder concoction. The right orifice is of equal height with the other ; lest the meat and drink should slip through before they are digested. It is not wide like the former, because it is to transmit the elaborated chyle, which is done by the strength of the stomach, in contracting itself. Wherefore the *pylorus*, besides its transverse fibres, has a thick and compact circle, representing the *sphincter* muscle, that it might the more easily shut and open. The stomach has arteries from the *ramus celiacus*, which accompany every vein, that blood may be supplied from the heart for nourishment of the part : it has likewise many nerves ; viz. two in its orifice from the stomach branches, which being produced, after they have run back in the *thorax*, and furnished the lungs and *pericardium*, are covered with strong membranes. These so cross one another, that they are carried obliquely, and without doubt with greater safety. The right branch compasses the fore and left part of the mouth of the stomach ; the left branch, the hinder and right part of the same : from these branches of nerves are sent downwards, to the very bottom ; a branch goes from the left nerve, along the upper part of the stomach, to the *pylorus*, which it infolds with certain branches, and goes to the hollow of the liver : other two nerves also go to the bottom of the stomach, from the branches which run along by the roots of the ribs. Hence it is, that, when, the brain is hurt, the stomach is sick, and falls a vomiting, as in a *vertigo*, *hemisrania*, &c. also, when the stomach is affected, the head and brain are ill, or afflicted with pain ; and by reason that the orifice of the stomach is so compassed with nerves, as if it were altogether made of nerves, it becomes of a most exquisite sense ; and hence it is that vomiting so often succeeds in many diseases, where there is a consent of

parts

parts with the stomach. The stomach is the seat of hunger, and does the first of all parts feel the want of food; (afterwards the other parts by faintness and universal debility,) for, the blood being spent upon the nourishment of the body the fibres of the internal membrane of the stomach are contracted, and so this pain, which is called hunger and thirst, is caused.

The intestines, or guts, begin at the *pylorus*, and end in the *anus* or fundament. They are called *intestina*, or inwards, because they are in the inmost seat of the body. They are of a round figure, that they might the better contain the nourishment; of a membranous substance, the better to have constriction and dilatation; and indeed their substance is almost the same with the stomach, having three coats, one common and external, being bred immediately from the *mesenterium*, but mediately from the *peritonæum*. The second, which is the middlemost, is proper, being membranous, strong, and furnished with fleshy fibres. The third, which is the innermost, is also proper, nervous, and lined with a crusty substance, framed of the excrements of the third concoction of the guts, glazed as it were with a mucus or phlegmatic substance, bred in the first concoction, by which excoriation is not only hindered, when sharp humours pass through the guts, but also by its assistance the expulsion of the fœces is furthered. This internal membrane has such a crusty substance, that the mouths of the meseraic veins might not be stopped; and that neither they nor the coat itself might be made callous by the continual thoroughfare of the chyle. The fibres of the internal membrane of the small guts are oblique, but of the external coat transverse; because these are appointed for the retention and expulsion of the chyle: but, in the thick guts, the inner coat has transverse fibres, the outward has oblique and straight, because they are appointed for the expulsion of the excrements: the inner membrane also of the small guts is full of wrinkles to stay the *chylus* from passing too soon. As to the length of the intestines, they are in general six times as long as the whole body: it is wonderful that the guts (of so great a length) should be comprehended in so small a compass, so as that they are not above a span distant from the centre. They have a motion, which is peristaltic, or the worm-like motion, by which they move themselves all over by a contraction from the upper parts downwards; moreover they have many turnings and windings, or bendings, which serve to keep the nutriment, till the concoction is perfectly finished, and chyle distributed.

The mesentery, is so called, because it is the middle of the guts. It is one in number, but divided into two parts, the *mesarcum* and *mesocolon*. By the *mesarcum*, the small guts are knit together; by the *mesocolon*, the thick guts are tied together. The substance of the mesentery is a double membrane, one above another. Its situation

tion is in the middle of the abdomen, sticking to the transverse processes of the *vertebræ* by ligaments, whence is its original: for it arises from the first and third *vertebræ* of the loins, where membranous fibres are produced from the *peritoneum*, which turn into strong membranes. The vessels of the mesentery are veins, arteries, and nerves, which pass to and from the guts, between the membranes. The veins are called *mesaraicæ*, and they are two-fold, viz. *sanguinæ* and *lacteæ*, both which are almost innumerable. The *venæ sanguinæ*, or *mesaraicæ*, receive the blood from the arteries, after nourishing of the parts, and so convey it back again to the liver. The *venæ lacteæ*, ascending from the guts, and carrying the chyle, do centre in the *glandules*, or receptacles of the chyle. These *glandules* of the mesentery, are to prop up and support sundry distributions of the branches to the *vena porta* and *arteria magna*; and hence it is, that about the centre of the mesentery are the greatest kernels, because there is the distribution of the greater and more collected vessels: if those become *scirrhus*, an *atrophia*, or extenuation of the whole body, viz. a wasting, leanness, and pining, follows, because the passing of the chyle is hindered, whereby the nourishment of the body is lost. Their substance in men is glandulous and solid, like other glands of the mesentery, watered as it were with the *venæ lacteæ*, yet capable of chyle in their least corners. Their connexion is in the hinder part *vertebræ lumbares*: in the fore part they are joined to the mesentery by small milky branches, which carry the chyle to these fountains or receptacles. The use of these milky *glandules* is to receive and contain the chyle coming from the *venæ lacteæ* of the mesentery: as also to digest and prepare it by the help of the neighbouring hot vessels, viz. the artery and vein, and then, being prepared, to thrust it out into the *thoracices*, and other parts, as the liver, which is easily proved by ligature; for, if these *lacteæ*, whether in the *thorax* or going to the liver, be bound, they always swell on that side next to the *glandules* of mesentery, and grow empty on the other sides: they also squeeze out the *serum*, being separated from the chyle in that light preparation, and expel it either into the reins adjacent to them; or into the emulgent arteries, to which they send branches; or into the *capsulæ atrabiliriæ*, appointed for melancholy; or, lastly, into the doubling of the *peritoneum*, in which they abide, which is sometimes the cause of the *dropsy ascites*: and herein we have reason why a dropsy is many times ended by diuretics and dissolved by urine; and how those, who are extreme drinkers, do so immediately evacuate what they have drunk; for that the ordinary way through the liver, heart, arteries, emulgent veins, ureters, and bladder, is vastly longer, and more tedious: hence also the cause is seen, why, in a real diabetes, the drink is so voided through the bladder in a very short space, as it is received, without change of consistency, colour, taste, or smell: hence too ap-

pears the reason of an *atrophia* of the parts, especially those of the *thorax*, which draw the chyle out of the milky receptacles; for that they are sometimes pressed together, whereby the distribution of the chyle is obstructed: sometimes also they are inflamed, tumified, and afflicted with a *scirrbus*. Hence it is that lithontriptic or nephritic medicaments do presently ease such as have a pain in their reins: as likewise cantharides, and such as incite to lust, do immediately, without stopping the passage, come to the arteries emulgent and spermatic; because that, in the accustomed journey, (much the longer way,) the virtue of the medicaments would easily be enervated. And here the reason is obvious why diuretic and nephritic medicaments make such an impression of smell and colour in urine, as is manifest in cassia, turpentine, juniper, asparagus, and other like things. Many of the *laſteæ* of the mesentery, coming through the greater glandules, and the sides of the *portæ*, are grafted into the liver. Their entrance is about the third lobe, to which many of the *laſteæ* from the mesentery and *appendices* of the stomach do come. From the upper part of the milky glandules, immediately under the *diaphragma*, there arise as many milky branches as there are glandules, which, through the middle of the *spina*, pierce the *diaphragma*, and, by mutual insertion, two of them are joined about the first *vertebra* of the loins; another branch, coming out of the second glandule, about the twelfth *vertebra* of the back, enters a little above the other insertion; but the third, rising from the third glandule, is to be seen near the eleventh *vertebra*, from whence it arises as a solitary branch, through the middle of the back, by the side of the *aorta*, and the vein *azygos*, between both, under the *œsophagus*, to which it is firmly knit by its membranes. These milky *thoracics* departing from the spinal, (about the third or fifth *vertebra* of the back,) through the midst of which they crept all this way, turn a little to the left, and creeping up under the *œsophagus* and *aorta*, and under the *subclavial* artery and the glandules of the *thymus*, they go forward to the left *clavicula* and left axillary vein; they enter the vein just where the outward jugular pours itself forth into the axillary aforementioned. From hence we learn, that these *thoracics* carry the chyle out of the milky glandules or receptacles of the mesentery to the subclavials; but the *laſteæ meſeraicæ* carry the chyle from the intestines either to the receptacle or to the liver: also that the chyle goes not to the head nor to the joints, but is carried to the heart with the blood that runs down in circulation, where it is changed into the sanguineous humour: and hence the *laſteæ* of the *thorax* receive their restorative force from nutriment, cordials, and medicaments, out of the stomach or *œsophagus*, by the *glandule laſteæ*, and carry them straitway to the heart: whence it is, that drinking vinegar, wine, cordials, and other like things, so immediately cause the strength to be restored; and presently at meat a man is strengthened,

and his hunger stayed: this virtue is conveyed by the milky branch which is near the *œsophagus*, and the short passage of the rest of the *lacteæ* to the heart: also vulnerary potions and pectoral drinks come a shorter and surer way to the heart and lungs, to which, by the long way about through the bowels and veins, they could not come so safe and secure; and by the same reason poisons as swiftly overcome the heart, infect the vital spirits, and destroy their harmony.

The liver is an organic part, and an instrument of the blood, (both for generating and perfecting it,) seated in the abdomen, just under the *diaphragma* or midriff, in the right *hypochondrium*, about a finger's breadth distance therefrom; is covered by the ribs for safety, but covers, or lightly rests upon, a great part of the stomach. It is divided as it were into two parts by the umbilical vein, which, after the birth, serves it for a ligament. It is said to be the original or beginning of the veins, because therein the roots of the two greatest veins appear dispersed, viz. of the *cava* and *portæ*, as roots implanted in the earth; also here are to be seen inserted, trunks and branches of the *vena lacteæ*, arising from the *pancreas mesenterii*. It is a great, thick, and hard, body; of a red colour, consisting of a substance proper to itself, fitted and ordained for that end. It differs from the livers of beasts, in that it has seldom any lobes, yet the hollow part of it has a fissure or chink, where the umbilical vein is implanted. Its magnitude is exceeding great, beyond all the other *viscera*; and bigger in man than in any other living creature, the proportion of body being considered; and this seems to be necessary, considering the noble uses and functions to which it is ordained. The action of the liver is sanguification; for the chyle, being conveyed to the liver by the *vena lacteæ*, is there sanguified, or made *chymus*; for the substance of the liver doth not only sustain the veins, but is also the efficient of sanguification, and of perfecting the blood by its circular motion; and, together with the blood, it generates natural spirits.

The gall-bladder and choler-channel are situated on the right side of the liver, in the under or hollow part thereof. The branches of both these, together with the branches of the *vena portæ*, are comprehended in a common bladder, called *capsula*. These branches of the *vesica fellis*, and *ductus choledochus*, or *biliarius*, being detained in the liver, are dispersed through its whole *parenchyma*, every where included in the aforementioned *capsula*, which is red, about the thickness of an artery, and takes its original from the *peritonæum*. The gall-bladder is a vessel long and round, much like a pear, hollow, furnished with a double membrane. Its magnitude is small, compared to the spleen or kidneys, being about two inches in length, and in some persons nearly three inches. The use of the gall is, 1. to cause a new and more perfect fer-

mentation of the chyle: 2. to prick the guts by its sharpness, to stir up their peristaltic motion, that they may drive down the chyle, and expel the excrements: 3. to mix with the chyle in such proportion, that, being converted into blood, the blood might thereby be kept from congelation.

To illustrate this subject more amply, we have subjoined a representation of the liver of a new-born child, where A A A A represents the circumference of the liver; B B B B, the lower part of the liver, in which there are several irregularities; C, the gall-bladder; D, the umbilical vein, running with a single trunk from the navel to the liver, E E E, the sinuses of the vena portæ, into which alone the umbilical vein inserts itself, with a single trunk; F, the trunk of the vena portæ cut off; G G G G, the principal branches of the sinus of the vena portæ distributed through the liver, which become conspicuous when a small part of the superficies of the liver is abraded off; H, the trunk of the vena cava; I I, the canalis venosus, or ductus venosus, arising from the sinus of the vena portæ, over-against the ingress of the umbilical vein, and inserting itself into the vena cava: this, in the uterus, carries a great part, and probably the greater part, of the blood, carried through the umbilical vein to the liver of the foetus, by a large passage to the vena cava and the heart; but this, after the birth of the foetus, gradually grows narrower and closes; K, the entrance of the umbilical vein into the sinus of the vena portæ. To this description of the external part of the liver, it may not be improper to add that of its blood-vessels, together with their numerous ramifications, freed from the parenchymatous substance. Fig. 1. represents the under side of these vessels; A being that part of the liver which lies next to the back; B, its right side; C, its anterior edge; D, its left side; E, the vena cava, where it passes through the diaphragm; E 1, E 2, E 3; its three principal branches, distributed almost through the whole liver; F, the vena portæ turned upwards, that other vessels may be more easily seen; F 1, F 2, F 3, F 4, four branches of the vena portæ distributed to several quarters of the flat part of the liver, but the fifth branch is not observed on this side; G, the gall-bladder; H, H, the vena umbilicalis become a ligament; I, the ductus communis choledochus; K, the canalis venosus, now performing the office of a ligament; L, the trunk of the vena cava descendens; a, a small portion of the membrane investing the liver; b, that part of the diaphragm which surrounds the vena cava; c, the biliary duct; d, the cystic duct; e, the place where these vessels meet; f, the hepatic artery; o, o, the hepatic nerves; p, p, p, the common capsula laid open; q, q, the lymphæducts; m, m, m, &c. the smaller branches of the vena portæ; n, n, n, the small branches of the vena cava.

The spleen, or milt, is situated in the left side under the short ribs, over against the liver, and under the midriff, between the ribs and the stomach, near to the back part. Its colour in new-born infants is red, because they have been fed with elaborate blood; but in those of ripe age it is of a darkish red colour, and sometimes almost blackish. It is connected by thin membranes arising from the *peritonæum*, to the *peritonæum* itself, caul, and to the left kidney, and sometimes also to the *septum* or *diaphragma*. The action and office of the spleen is not to be either the receptacle or the place of the generation of melancholy, (as several learned men have thought,) nor to make blood, (as many others have imagined,) but to highly perfect the blood already made, that it may serve as a *fermentum*, both to the daily generated chyle and all the rest of the blood in the body: the excrementitious blood which cannot be separated from the spleen, if it be thin and watery, is purged out, first, by the arteries, not only to the guts, but also to the kidneys, by the emulgent veins; hence, in diseases of the spleen, the urine is many times black, in which case we commonly administer diuretics. Secondly, by the stomach; whence, in the scurvy and a quartan ague, the sick spits exceedingly; but, if this excrementitious blood be thick and earthy, it is voided directly by the *anus* by proper arteries going the guts, by which means the ordure is black, as also by the internal *hæmorrhoidal* veins, as the great Hippocrates has often shewn.

The reins, or kidneys, are situated under the liver and spleen, by the loins, between the two coats of the *peritonæum*, at the sides of the *cava* and *aorta*, under which very great nerves lie hid, and rest upon the muscles of the thigh: whence it is that, a stone being in the kidneys, a numbness is felt in the thigh and leg of that side. The left kidney is for the most part highest; the right is lowest to give way to the liver, reaching by its end the third *vertebra* of the loins. They consist of a substance solid, fleshy, thick, hard, and compact, almost as the heart, but not so fibrous. They are connected by an external membrane from the *peritonæum* to the loins and *diaphragma*; by the emulgent vessels to the *cava* and *aorta*; and by the ureters to the bladder. The right kidney is tied to the *cæcum*, sometimes also to the liver: the left to the spleen and *colon*; hence pains of the reins are exasperated by plenty of wind and excrements. The colour of the flesh of the kidneys is red; and through their hollowed sides are carried the emulgent veins and arteries, proceeding from the trunks of the *cava* and *aorta*: they have also emulgent arteries, which are large, and derived from the trunk of the *aorta*, which carry blood for nourishment, and that therefrom the *serum* (which is plentiful in the arterial blood) may be separated: they have also one very small nerve on each side, which springs from the *ramus stomachicus*, proceeding from the *par vagum*, and is inserted into the proper membrane of the kidney; whence

whence arises the sympathy between the stomach and reins; and that they who are diseased in the kidneys, by the stone or some other distemper, are for the most part sick at stomach, and troubled with vomiting. The use of the kidneys is to attract the sanguineous serosity by the emulgent arteries, that so the mass of blood may be cleansed: which blood, going through these vessels, is always carried through the branches of the emulgents, disseminated abroad through the whole *parenchyma* of the kidneys, and runs at length into very small passages, so that at last the wheyish humour is thrust quite out into the flesh of the kidneys, the good blood remaining partly to nourish them, and partly to return by the little emulgent veins, which are open into the cava, and so to the heart. The serous part is strained through the *papillary caruncles*, which have holes into the branches of the *ureters*, and after grow together into one cavity or expansion of the *ureter*, into which the serum is emptied: through the ureters it passes into the bladder, where it becomes urine.

The deputy kidneys, or black choler cases, are so seated, that they rest upon the upper part of the kidneys, on the outside, where they look towards the *vena cava*, being covered with fat membranes. In figure and substance they for the most part resemble the kidneys, save that their flesh is a little looser: so that they seem like little kidneys resting upon the great ones. They have an apparent internal cavity, furnished with a dreggy and black humour; and are strongly connected, where they rest, to the external membrane of the reins, and to the *septum transversum*, to which they commonly stick in dissection.

The *ureters*, are white vessels, like veins, but thicker, whiter, and more nervous; consisting of a single membranous substance, inclosed in a duplication of the *peritoneum*. They are as long as between the kidneys and bladder, and commonly as thick or wide as goose-quills: but, in dissection of persons troubled with the stone, they have been so wide as to admit of two fingers. Their original is in the kidneys, within whose cavities they are divided into nine or ten little pipes or channels, which are fitted to the little fleshy teats or *caruncule papillares*, that they may distil the serum into the pelvis, or basin, or large cavities of the *ureters* within the kidneys. The *ureters*, descending within the duplicature of the *peritoneum*, upon the muscles of the loins, to the bladder, are inserted obliquely into its neck; then, ascending upwards between its membranes, they perforate the innermost coat together, and through the same hole they both enter the bladder: in the implantation of the *ureters*, two little membranes or valves are placed, like the valves in bellows, shutting up the passages of the *ureters*, so that the urine cannot go back. They receive small veins and arteries from the neighbouring parts, and nerves from the *par vagum*, and marrow of the loins. Their use is to convey the urine from the kidneys into the bladder.

The bladder, or receptacle of urine, is seated between the duplicature of the *peritonæum*, in the cavity of the *hypogastrium*, which is called pelvis, or the basin; which in a man lies between the *os pubis* and *intestinum rectum*; in a woman, between the *os pubis* and the neck of the womb. Its figure is oval or globical, that it might hold the more; from the bottom it is by little and little straightened into a narrow neck. Its magnitude is various; and, according to the greatness of the lungs, such is the greatness of the bladder; and such animals as have no lungs have no bladder: man, according to his magnitude, has of all living creatures the greatest bladder. Its substance is partly membranous, for strength sake, as also that it might extend and wrinkle together. It has two membranes and one muscle, which most anatomists make to be a third membrane, and not a muscle. The bottom is fastened to the *peritonæum*, and to the navel by a middle ligament called *urachus*, and the two naval arteries dried up. The neck of the bladder is tied in men to the *intestinum rectum*; but in women to the *vagina uteri*, or neck of the womb, and to the neighbouring hip-bones. The bladder has three holes; two a little before the neck, where the *ureters* are inserted, and a third in the neck, through which the urine is voided. The neck is fleshy and fibrous, furnished with a sphincter muscle to purse it up, that the urine may not pass out against our will; in men this neck is long, narrow, and wreathed, because, being placed under the bodies which constitute the yard, it runs upwards under the share-bones, from the fundament to the origin of the yard. In women it is short and broad, stretched forth downwards, and implanted above into the neck of the womb. The bladder has arteries from the *hypogastrica* in men, and from those which go from the neck of the womb in women; by these it is nourished; it has veins also from the *vena hypogastrica* implanted into the sides of its neck, variously diffeminated through the bladder, which are mutually conjoined one with another and with the arteries by open holes, that nutritive blood may return; and it has nerves from the *par vagum*, and from the *medulla* of the *os sacrum*.

The spermatic vessels, in men called *vasa preparantia*, are two-fold, viz. the two spermatic veins, and the two spermatic arteries. The right-side vein springs from the trunk of the *vena cava*, a little below the rise of the emulgent, otherwise it must go over the *aorta*, and then there would be danger of breaking; or, at least, by reason of the pulsation of the artery, the venal blood might be hindered. Both the feminal arteries arise from the trunk of the *aorta*, about two inches distant from the emulgents; these vessels, being a little distant one from another, are tied together by a thin membrane from the *peritonæum*. These spermatic preparers are greater in men than in women, and the arteries are greater than the veins, because very much heat, vital spirit, and arterial blood, are requisite to make seed. These vessels are

are carried obliquely above the *ureters* to the groins; but in their progress they are joined by infinite anastomoses or inosculation: so that the arteries are so coupled within the coats of the veins, as if they were but one vessel, and they are knit together by a membrane arising from the *peritonæum*, and afterwards carried to the beginning of the testicles, like a tendril of a vine, being so interwoven that a curious eye cannot distinguish a vein from an artery. This intertexture of veins and arteries being the twistings of the *vasa preparantia*, makes a long, thick, glandulous, but hard, cord, called *corpus varicosum*, which is without any remarkable cavity. These vessels do not pass through the *peritonæum*, as in dogs, but are carried between its double coat, with a small nerve from the *par vagum* and the muscle *cremaster*, and, passing to the bottom of the testicle, end at the *vas deferens*. These arteries carry blood and spirits (in whose admirable windings they are more elaborated) to the testicles, from whom they have a virtue seminal: with this blood the stones are nourished, and part of it becomes seed: the veins are closely interwoven with the arteries about the testicle, and joined to them by mutual anastomose; that they may carry back the blood which remains unto the left emulgent, or to the *vena cava* on the right side, from whence the spermatic vein commonly springs. If one or both the spermatic arteries be injured, or wanting, as they are sometimes, such persons doubtless cannot get children, but must necessarily be barren.

The testicles in men, are glandulous bodies, flaggy, spongy, soft, and white, without any cavity, full of small veins and arteries, such as are not in any other part of the body. Their figure is oval, but it sometimes varies, according to the turgency of any of the neighbouring vessels. The right testicle is hotter, and better concocts the seed, than the left: because the former receives the arterial blood immediately from the *aorta*, the latter from the emulgent. They are seated externally without the abdomen, under the belly, at the root of the yard, in the scrotum or covering: being commonly in men answerable to the bigness of a small hen's egg. The membranes being taken away, the substance of the testicle comes in sight, upon which, athwart, is placed a small body, called *corpus vermiforme*, to the one end whereof cleaves the *vas spermaticum deferens*, the carrying spermatic vessel, which enters into the substance of the testicle, and empties the seminal matter thereinto: from the other end arises the *vas ejaculatorium*, which in the beginning is full of turnings and windings, and cleaves firmly to the testicle, by its ends, being loose, and separate in its middle. They have vessels of all sorts, veins and arteries from the seminal vessels, and a large nerve from the *par vagum*: sometimes also they have two nerves from the twenty-first pair of the spinal marrow, which, being conjoined with the spermatic vessels, are carried with them through the production of the *peritonæum*, and disseminated

diffeminated into the tunicles. They have on each side one proper muscle, called *cremaster* or *suspensor*: and a common muscle, from the membrane of the scrotum, called *dartos*. The testicles have also several tunicles, coats, or coverings; of which two are common: three proper to themselves only. The first common coat (which is to defend the part) is constituted of the skin and scarf-skin, and is called *scrotum* or *bursa scroti*, because it is like a purse or bag: it is soft, wrinkled, and void of fat: having in its lower part a line, according to the length thereof, which divides into a right and left part, and is called *futura*, or a seam. The second common coat consists of a fleshy membrane, springing from the *membrana carnosæ*, which is here thinner than in other places, and full of veins and arteries, and is called *dartus*: this by many is comprehended under the term *scrotum*. The first proper coat is called *vaginalis*, the scabbard coat; and *elicoïdes*, from its thinness, which is yet strong and full of veins, arising from the processes of the *peritoneum*, and cleaving to the *dartos* by many membranous fibres, whence its exterior part is rough, its interior smooth. The second proper coat is called *erythroides*, because of its redness: it has some fleshy fibres from the *cremaster*, from which it is propagated, and is spread over the *vaginalis*. The third and innermost, called *albiginea*, arising from the coat of the spermatic vessels, immediately encompasses the substance of the stones, and as it were binds the same, being white, thick, and strong. The use of the testicles is to elaborate the seed, and to make it, by their heat and inbred faculty: for the efficient cause of the seed is the proper *parenchyma* of the testicles, both in regard of their hot and moist temper, and of their specific property; for, the blood being prepared, they convert it into seed; what remains over and above serves for nourishment of the part, and the remainder is conveyed back, by the spermatic veins, to the heart.

The *vasa deferentia*, are the vessels carrying away the seed, and these begin at the testicles, and end at the root of the yard, whither they carry and ejaculate the seminal humour; being in number two, on each side one. Now these *vasa deferentia*, called also *meatus seminales*, are divided into three parts; the beginning, middle, and end: under which are comprehended, the *parastrate*, the *vasa ejaculatoria*, the *vesiculæ seminales*, and the *prostatæ*. The *parastrate*, or assistants, are the beginnings of the *vasa deferentia*. Their substance is of the middle nature, between that of the testicles and that of the *vasa ejaculatoria*, being within glandulous and spongy, but without membranous. They have their origin in the stones, making many anastomoses there, with the *vasa preparantia*, by means of innumerable small pipes, or white fibres. The use of the *parastrate* is to perfect and finish the seed, by a virtue which they receive from the testicle, and, while the seed is lodged in them, frequent

frequent lust is not provoked. The *vafa ejaculatoria* are the middle of the vafa deferentia, properly so called; these convey the seed from the parastatae or corpora varicosa to the vesiculæ seminales. Their substance is white and nervous: their figure long and round, with an obscure cavity or hollowness: their situation is partly in the testicles, partly in the cavity of the abdomen, above the os pubis or share-bone; for they run upwards and are knit to the vafa præparantia by a thin membrane, and so are carried along to the flanks and share-bone, which for that purpose have a slight cavity. After being turned back downwards, they pass above the ureters, and under the hinder part of the bladder; above the *intestinum rectum*, at the neck of the bladder, they are on each side widened, and there constitute the seminal bladders. *Vesiculæ seminales*, the seminal bladders, are the end or termination of the vafa deferentia: after the constitution of these bladders, these carrying vessels are united into one small passage, and are inserted into the prostates. These bladders are many in number like little cells, and seem to make on each side one remarkable great and winding one, for that they go one into another, much resembling a bunch of grapes. Their substance is nervous, and they are seated between the ligaments of the bladder and the rectum, by the sides of the vafa ejaculatoria a little before the said vessels grow thick and unite. Their use is to contain the seed being perfected, and to reserve the same till the time of coition, that so there may be a sufficiency for generation. The *prostates*, standers before, stoppers, or conductors, are two certain caruncles (in which the vafa deferentia terminate) manifestly differing from the vesiculæ seminales in use, form, situation, and magnitude. Their situation is at the root of the yard, above the sphincter of the bladder, on each side at the neck thereof. Their substance is spongy, yet harder and whiter than any other kernels, and they are also covered with a thicker membrane, being of exquisite sense, that they might cause pleasure in coition. They are flat before and behind, but round on the sides: their magnitude is usually as big as a walnut, and they are open by certain pores into the urethra or urinal passage, which is evidently apparent in such as have died of a gonorrhœa, where they have been dilated, and in whom the seat of that disease did lodge. Their use is to contain a viscous and slippery humour, to moisten the urethra, for the more easy and speedy passage of the seed: and they also serve to stay the involuntary effusion of the seed, and to hinder its regurgitation, being once emitted. They terminate in a small caruncle upon the urethra, which as a valve serves to hinder the coming of urine into them: under and by this caruncle, on each side, there are inconspicuous holes, or pores, through which the seed passes into the urethra, just as quicksilver passes through leather, which it does by virtue of its being replete with a vast quantity of subtil and penetrating spirits. In these pores

of the proſtatae, and in the feminal bladders, the ſeat of a virulent gonorrhœa lies; and therefore, if they be broken, hurt, or dilated, either by a catheter putting into the bladder, or by any other means, there follows immediately an incurable gonorrhœa. The diſtance between the root of the ſcrotum and the podex is called *perineum*. This, with the pubes and ſcrotum, are furniſhed with hair, becauſe glandules are placed here, which abound with plenty of humidity, a part of which they ſend to the ſkin for the generating thereof.

The *penis*, or yard, is an organical part, long, and roundiſh, but broader on the upper ſide than where the urethra is, being the male inſtrument of generation, and appointed for the evacuation of the ſeed and urine. It is ſeated under the os pubis exactly in the middle, becauſe it is only one in number. Its magnitude is extremely various in different ſubjects, being for the moſt part greater than ordinary in little men; alſo in ſuch as have large noſes, for the proportion of the yard very much answers that of the noſe; in ſuch as have thick, full, large beards; and in Æthiopians, or blackamoors. It conſiſts of a ſcarf-skin, fleſhy membrane, and a proper ſubſtance of its own; but is void of fat even in the fatteſt men, leſt thereby its moſt exquisite ſenſe ſhould be dulled. Its proper ſubſtance is four-fold: firſt, the urethra; ſecondly, the glans; thirdly and fourthly, the two nervous bodies, one on each ſide. The *urethra*, or paſſage of the urine and ſeed, is a pipe of a nervous ſubſtance, of the ſame bigneſs from the neck of the bladder (to which it is joined) to the end of the yard, or beginning of the glans, for in the middle of the glans it has a greater hollowneſs. Its ſubſtance alſo is thick, looſe, and ſoft, like that of the two lateral ligaments or nervous bodies. This urethra has alſo two membranes, and a ſubſtance proper to itſelf. The one membrane is internal, thin, and of exquisite ſenſe, with which alſo the glans is covered; this ſprings from the thin membrane which clothes the nerves of the yard: the other is external, more thick and fleſhy, and furniſhed with nerves: the middle part, which is its proper ſubſtance, is looſe, ſpongy, and black, that it may be diſtended or contracted with the other parts. In the beginning of its channel are theſe pores through which the ſeed is ejaculated, as alſo a little membrane or caruncle like a valve ſtretched before it, to keep the ſeed and urine from returning into the ſpermatic veſſels: if it be broken or eroded by ſharp humours, or the unſkilful uſe of a catheter, there follows an incurable gonorrhœa. Its uſe is to be the common paſſage of the urine and ſeed. *Balanus*, glans, the head or nut of the yard, is an hollowed kernel, wider in the middle than at the external orifice: of a globular form, even, and compaſſed with a circle or crown. Its ſubſtance is fleſh, more ſolid than the reſt of the yard, of a moſt exquisite ſenſe, and covered with an exceeding thin membrane, ſoft and red. It is covered with the reduplication of the external ſkin of the yard,

called *preputium*, (a *putanda*, from cutting off,) the foreskin: this is that which the Jews cut off in circumcising. This skin is tied at the root of the glans, by a certain ligament, called *frænum*, the bridle, arising from a combination of the tendons of the muscles of the yard and a nerve, and terminating in the extreme hollowness of the nut. The two nervous bodies, or hollow ligaments, one on each side, constitute the remaining and greatest part of the yard; the whole substance whereof being like a thick spongy artery, stuffed with flesh. Their external substance is long, thick, compact, hard, and nervous; their internal substance is spongy, thin, hollow, of a net-like texture, framed of innumerable twigs of veins and arteries, of a dark red colour, inclining to black, and filled with a great abundance of black blood, very full of spirits, which, waxing hot, causes a distention and erection of the yard. These two bodies (where they are thick and round) spring from the lower parts of the share-bone, or hip-bones, to which they are strongly tied with two ligaments. In their beginnings they keep some distance, being separate one from another, almost like a Y, that the urethra may pass between them; but, when they cease to remain perfectly separate, viz. when they come to the joining at the share-bone, they lose near a third part of their nervous substance; yet they still remain distinct by the coming between of a single membranous partition, called *septum lucidum*. This membrane is white, thin, transparent, and full of nervous fibres; it arises from the upper part of the commissure of the os pubis, and upholds the said two lateral ligaments, and the urethra, as a stay, the like of which is also found in women. The yard has all sorts of vessels, as veins, 1. external, running up and down in the skin, from the pudenda; 2. internal ones, from the *venæ hypogastricæ*, which are spread through its whole body. It has arteries, two internal remarkable ones, arising from the hypogastrica, which are inserted into the beginning of the growing together of the two nervous bodies, which are scattered up and down according to the length of the part: but in the middle, where the *septum lucidum* is thinnest, they send branches through the spaces of the fibres, the right artery, into the left nervous body, and the left into the right, carrying spirits and blood to fill up, erect, and nourish, the yard. It has two nerves from the marrow of the *os sacrum*, which disseminate themselves through all parts of the yard, both internal and external; ascending through the middle of the forked division, they spread themselves into the muscles, the whole body of the yard, and the glans, that there might be an exquisite sense and delectation. It has also four muscles, two erectors, and two accelerators or ejaculators, under which muscles lie hid the two nervous bodies.

The spermatic vessels in women are the same with those in men, and agree in their number, nature, original, and office; but they differ from those in men in the

the following things : first, they differ in their longitude ; in women they are shorter, by reason of the shortness of the passage, but they have more wreathings, windings, and turnings, where they make the corpus varicosum about the testicle, that the seed may have a sufficient stay for its due preparation : secondly, in their insertion ; in women they pass not whole to the testicles, as in a man, but are divided in the midway : whence the greater part goes to the testicles to form the corpus varicosum ; the smaller part to the womb, into whose sides it is disseminated, especially to the upper part of the bottom, to nourish the womb, and the child therein ; and that by those vessels some part of the menstrual blood may be purged forth in such as are not with child. This smaller part is tripartite, being divided below the testicle into three branches, of which one runs out into the womb, as aforesaid : the second is distributed to the *vas deferens*, or trumpet of the womb, and to the round ligament : the third creeps along the sides of the womb, insinuating itself among the *venæ hypogastricæ*, with which and the arteries they are joined by anastomoses : thirdly, the spermatic veins receive the hypogastric arteries as they pass by the sides of the *uterus*, that the blood might be the better elaborated ; and they are intermixed with many wonderful *anastomoses* for the preparation of seed.

The testicles in women differ from those in men in these following things : 1. in situation, for these are placed within the hypogastrium, about two inches above the bottom of the matrix, in such women as are not with child, being tied by certain ligaments : 2. in magnitude, for these are less than the testicles in men ; for by reason of their heat they are contracted after the woman is fourteen years of age ; whereas, before that age, they are more large, being full of a white juice : 3. in their surface, for these are more uneven than those of a man : 4. in their figure, for these are more broad and flat on the fore and hinder parts ; they are also more hollow, and fuller of spermatic moisture : 5. in their substance, being softer, and, if you take off the membrane, you will find them conglomerated or knobbed together of divers little kernels or bladders, five or six, or more, which contain the thick seed : 6. in their membranes or coats, for, whereas mens have four tunics, these have but one, because they are in a closer and warmer place ; this single coat is called by Galen *dartos* ; but, where they receive the femoral vessels, they are half covered over with the *peritonæum* : 7. in their connection, for they are knit to the sides of the uterus by two manifest passages, viz. by the two upper ligaments, which are loose and membranous, and out of which, in the time of coition, the seed is cast : 8. in their appendices, these having no *parastatæ*, nor any *cremasta*s ; but are stayed by the broad lateral ligaments, called the bat's wings. Their use is, the same as in man, to make, elaborate, and perfect, the seed.

The *vasa deferentia*, in women, spring from the lower part of the testicles, and are either inserted with a very short passage into the bottom of the womb; or diffeminated at the trumpets of the womb, with sundry exceeding small sprigs, not much unlike the *vena lactæ*, arising from the *vasa præparentia*, and continued with them, though here changing their name and use. Their substance is firm, white, and nervous. They pass by the membranous ligaments to the matrix, not straight, but wreathed or twining, with a multitude of windings; that the shortness of the way might be recompensed by such a labyrinth. Near the testicles they are broad, afterwards they become narrower, and smaller, and about the womb they become broad again, and are inserted into the cornua, and capacity of it. Their use is partly to carry the seed to the trumpets of the womb, to be there farther perfected, and better elaborated, and to be kept for use: and partly to carry it to the bottom of the womb, where another branch runs into the neck, by which way also the seed is voided, causing (by reason of the length of the way) the greater delectation. The *tube fallopianæ* (so called from their likeness to a trumpet of war) are two in number, one on each side, of a nervous, white, thick, and hard, substance; and of a figure long, round, and hollow. These Spigelius calls *vasa cœca*, because they have but one orifice. They arise from the bottom of the womb, at one end; and, when they have gone a little therefrom, they grow broader by little and little, crisping themselves like the tendrils of a vine, till they come towards their ends. Then, dismissing their wrinkled crispations, and becoming very broad, they end in a certain extremity which seems membranous and fleshy by reason of their red colour, and at last become very torn and jagged, having large holes which lie always shut, those jagged ends ever falling in upon them, which notwithstanding, if they be opened and widened, represent the broad end of a brazen trumpet. They pass obliquely from the cornua over against the testicles, being carried by the membranous ligament, and (as it were) half compass the testicles, but are distant from them every where about half an inch, they neither proceeding from the stones nor being inserted into them; and, as in their beginnings they are open, so in their endings they are shut up and blind, not reaching to or being inserted into any other part. They are commonly fastened by very thin membranes, not much unlike the wings of bats or flitter-mice, through which many veins and arteries are diffeminated from the testicles into their hollownesses; by which the seed is conveyed from the testicles into these tubæ or trumpets. Their insertion at the bottom of the womb is large, whence springs a nervous pipe, stretched out nearly to the middle of the trumpet, that by it the seed may be sent into the bottom of the womb: their middle is capacious, with certain little cells or bladders, containing white seed; after which they are wreathed and crisped: their

end is narrower again, and blind as aforesaid. Now, what the *vesicæ seminales* are in men to preserve the seed, such are these blind passages in women: for they are annexed to the testicles by the aforesaid little membranes, through which many little veins pass, and by which the concocted seed is carried, and here laid up as in a store-house, where also, by the irradiation of the virtue of the testicles, it is yet better digested, and made more perfect; from whence, in the time of coition, it is by the *cornua* sent into the cavity of the womb.

The *uterus matrix*, or womb, is an organical part, the receptacle both of the seed and of the child: and it is situate in the middle of the *hypogastrium*, called *pelvis*, the basin, by the *os sacrum* and flank-bones, between the *intestinum rectum* and the bladder. Its magnitude, even in virgins of big stature, exceeds not the bigness of a walnut: but in women with child it dilates itself into such a capacity as to contain the child: nature made it at first small, that it might embrace the yard, and cherish the seed, because it is but little in quantity. Its figure is said to resemble a pear: but the neck thereof resembles an oblong and round pipe or channel. Its connection is either by the neck or the bottom: the neck is knit by its own substance, and by membranes; but the bottom by peculiar ligaments. On the fore side the neck is joined to the *vesica* and the *os pubis*, by membranes from the *peritonæum*; on the hind side, to the *os sacrum* and *intestinum rectum*; but about the *vulva* it grows together with the anus; on the sides it is loosely joined by membranes to the *peritonæum*. The *fundus* or bottom is not tied by its substance, but is free; but in its sides it is fastened by two pair of ligaments, which keep the womb suspended or hanging loose. The upper pair is broad and membranous, which are joined to the *os ilium*, and end in the bottom, near the *cornua*: they are soft and loose, that they may distend or contract; and by *Aretæus* they are likened to the wings of bats: if these ligaments or muscles be loosened or broken, by difficult labour or other violence, it may cause the falling down of the womb. The two lower ligaments are red like muscles, and round like earth-worms; and pervious to the clitoris, from whence, (like a goose foot,) destitute altogether of their hollowness, they spread themselves upon the fore part of the thigh. These arise from the sides of the bottom of the womb, touching at their beginning the *vasa deferentia*; then, ascending to the groins, they pass through the productions of the *peritonæum* and the tendons of the oblique descendant muscles of the belly, and are partly obliterated in the membranes of the bones near the clitoris, where they are joined, degenerating into a broad nervous thinness, almost like a goose foot, as aforesaid; and partly run through the inner part of the thigh to the knee: hence it is that women in their first months going with child complain of a pain in the inside of their thighs. The substance of the womb is

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membranous,

membranous, that it may be distended or contracted as need shall require : it is full of wrinkles, which in women impregnated are extended to widen the womb, which after exclusion of the child, as also in age, are again contracted. The membranes of the womb are two, one common, the other proper. The common is doubled, and grows to the sides on each hand : it arises from the peritonæum, and is exceeding thick, firm, strong, smooth every where except where the spermatic vessels enter or the ligaments go out. The proper and internal membrane is also double, between both which there are fleshy fibres, such as are found in the stomach, with also here and there a kind of spongy substance. The womb has veins and arteries accompanying one another, which are carried between the tunics or coats thereof, and cast out their blood into its membranous pipes, but not into its innermost cavity : these vessels arise both from above and beneath, viz. from the upper and lower parts of the body ; for the blood ought to come from the whole body, that the whole may by the monthly terms be purged, and that, in the time when a woman is impregnated, the child might be nourished. Those which descend from above run all the womb over, especially in the fundus or bottom, being derived from the spermatic vessels, or those by which the *vasa preparentia* are constituted, as also from the hemorrhoidal branch, whence is the great consent between the womb and the spleen : the left ends also of the veins and arteries are joined with the right ends, that the right side may be supplied with plenty of blood. Through the arteries (in women not with child) the menstrual blood always flows : what is not thus evacuated, returns back again to the heart by the veins, which are joined to the arteries by many anastomoses. The veins and arteries that come from beneath, which are larger than the former, spring from the *ramus hypogastricus* of the *cava* and *aorta*, and, running through the neck of the womb and lower part of the bottom, are every where joined with the superior ones by manifold anastomoses. The mouths of these vessels enter into the cavity of the fundus, which, in the time of the flowing of the terms, are opened, and gape, and, because they resemble cups or faucers, are called *acetabula* or *cotylidones* : to these, when a woman is with child, the *placenta* is joined, which receives the blood for nourishment thereof. And, because these branches are carried to the neck of the womb, by them women which are with child sometimes also void their courses. It is furnished with many nerves from the *par vagum*, and the nerves of the os sacrum, which run to the os uteri and parts about the *vulva* for delectation sake, and to the lower part of the fundus, as also to the upper part thereof, where they are interwoven like a net ; hence arises the great sympathy between the womb and the brain. The use of the womb is to attract, receive, retain, preserve, and cherish, the seed, in order to conception : and after conception to contain and nourish

nourish the foetus till the time of birth. The short neck of the womb, which is its inner neck, is that which contains the orifice, leading immediately into the cavity of the womb; this orifice is a hole not large, but such as may admit a probe or large quill, and like a mouth may be dilated or pursed in: this entrance is but a transverse line, which when it is exactly opened becometh round: this hole after conception is so closely shut, that it will not admit the point of a bodkin; but at the time of delivery, it opens itself wide according to the magnitude of the infant, be it ever so great. The cavity of this neck is rough, arising from wrinkles, whose edges tend inwards, lest the seed which has been cast in should flow out again, as is seen in such barren women as have the slipperiness of the womb. The *fundus*, or bottom, is the most capacious part of the womb, seated above the os pubis, that it may be there distended. The external surface of the womb is smooth and even, covered as it were with a kind of humidity: its inner surface is full of porosities, which are mouths through which, in time of a woman's breeding, blood passes out of the vessels of the womb, to nourish the child. Within the orifice of the inner neck grows a caruncle, which exactly shuts the hole; in which caruncle are to be seen pores which seem to be at the end of the *vasa deferentia*, terminating at the neck. This neck of the womb is opened in superfœtation, in an abortion, in an ejection of a false conception, but especially after a wonderful manner at the time of child-birth, when it is widened according to the magnitude of the child: at this (saith Galen) we may wonder, but we cannot understand it: therefore it is our duty to acknowledge the wisdom and power of him that made us. The external or greater neck of the womb, called *sinus pudoris*, is a long channel, hollow, (even while the child is in the womb,) and situate between the vulva and internal orifice of the womb, being that passage which receives the penis in coition. Its figure is long, (nearly seven inches,) hollow, (large enough to entertain the penis,) and wrinkled within: but its length and wideness are hardly determinable; some say it is as wide as the intestinum rectum, but it is longer or shorter, wider or narrower, according to the lust of the woman, the penis being always in coition closely embraced by it. Its substance is a hard and nervous kind of flesh, and a little spongy like the yard, wrinkled within (chiefly in its upper part) that it might be occasionally dilated. Lastly, towards the middle or external part of this greater neck, in the fore and upper part, near the vulva, is the insertion of the bladder into sight, that from thence the urine may be voided by the meatus urinarius, which is short and straight, but dilatable; it is without covered with a fleshy sphincter, but within black, and of the same substance with the urethra in men.

The membrane called the *hymen* is the sign or flower of virginity, because it can be found in none but virgins: it is called the flower of virginity from the
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blood which flows in the first act of coition. That there is such a thing is not to be doubted; it was the legal sign of a virgin among the ancient Hebrews, as Moses has at large declared, Deut. 22. Secondly, it was a received and known thing in all the eastern countries, as Leo Africanus affirms; and the greatest anatomists conclude, that in virgins who have used no violence to the part, nor have it fretted, eaten, or broken, by any defluxion of sharp humours, it is never wanting. What it is, we now come to enquire into: first, some say, it is a transverse membrane, and they are indeed in the right: but they who would have holes in it, like a sieve, are deceived. Secondly, others say, it is a transverse membrane, going across the neck of the womb, a little above the neck of the bladder, which resists the first entrance of the penis. Thirdly, Sebizius saith, that if this membrane is absent, we must rest in the straightness of the neck and other marks, which being widened in the first coition, pain and effusion of blood follow, by reason of the solution of the continuity. Fourthly, Severinus Pinæus (whose opinion is the newest of all) saith, that the four myrtle-shaped caruncles, tied together by a small membrane, placed in the outer part of the neck of the womb, is the true hymen so much sought after; and without doubt Pinæus is in the right: to this Bauhinus agrees; and Bartholinus saith, that he could find no other in a young girl carefully dissected. It is situate in the neck of the womb, just behind the insertion of the neck of the bladder, or a little more inwards: but its situation does now and then vary a little: there this membrane goes across the cavity, much like the diaphragma, or midriff. As to its figure, it has an hole in its middle, big enough to receive a pea, by which the menstrual blood passes: if it be without any hole, so that the courses cannot flow, thence come diseases, and (if it be not opened) at last death. It is connected orbicularly to the neck of the womb, as if it grew out of the same, where it is thicker than in the middle: its substance is partly membranous, partly fleshy, yet not very thick: it is interlaced with many little veins, which being broken in the first coition, pain and bloodshed follow, even as they do in some men, where the frænum or bridle of the penis (being exceeding short and straight) is torn or rent asunder. Its use is to defend the internal parts from injury; as also to be the sign of virginity.

The *vulva* is the external privity, which is that which offers itself to sight before dissection, being located under the fore-region of the os pubis. The more principal internal parts are the wrinkled chinks, the four myrtle-shaped caruncles, the orifice of the urinal passage; and the clitoris: the more external parts are the wings, the lips, the great chink, and the pubes, or hairy part. The wrinkled and inward chink, is the immediate mouth of the larger neck of the womb, lying behind the myrtle-

shaped caruncles: it is of a reasonable largeness, and framed by nature to stay the seed cast into the neck from too quickly slipping out. The myrtle-shaped caruncles, are placed so as to appear in a quadrangular form, one at each corner: one of them is placed before or above in the circumference of the hole of the urinary passage to shut the same, it being largest and forked, that it might receive the end of the meacus urinarius, and hinder external things from entering: the second is opposite to the former, and is situate below: the two remaining ones are placed collaterally: their figure resembles a myrtle-berry: their magnitude is various in different subjects; their substance is framed of the reduplication of the fleshy neck of the womb, being partly fleshy, partly membranous: they are connected with membranes or valves: their uses are for titillation in the time of coition, and also immediately to shut the orifice of the neck, that air, dust, nor any other matter, may enter. The orifice of the urinal passage, is a hole under the clitoris above the neck; through this women make water, and it seems to be shut with a kind of fleshy valve. The clitoris, called by some *nympha*, by others, *tentigo*, by others the woman's yard, because it resembles a man's yard in figure, substance, composition, repletion with spirits, erection, and situation. Its figure is somewhat like the glans and præputium of the penis; but it is commonly small, being seated in the middle of the os pubis in the upper and former end of the fossa magna, where the alæ or nymphæ meet; but in its beginning for the most part it lies hid under the nymphæ, and afterwards sticks out a little. Its substance is like that of a man's yard, consisting of two nervous bodies, hard and thick, but within full of a black spongy matter, as in the lateral ligaments of the yard. The two lateral ligaments arise from the internal knob of the ischium: the third is between these, springing from the joining of the os pubis. Its muscles are the same in nature and number with those in a man. Its extremity is the glans, which hath a superficial hollowness, but not bored through; this is covered with a very thin skin as a preputium, which springs from the joining of the nymphæ. It has veins and arteries, common to it and the privy, and a nerve from the par vagum, larger than its body might seem to require, to give it an exquisite sense, and cause erection. In this is the seat of delectation and lust. The *alæ* or *nymphæ*, commonly called wings, appear when the two lips are severed, being two productions made of a soft and spongy flesh, and the reduplication of the cutis, and situated at the sides of the neck between the two lips: being joined above, they compass the clitoris: they are in number two; in colour red like cock's gills; in figure almost triangular, but much resemble a cock's comb; in substance partly membranous, partly fleshy. Their use is the same with the caruncles, as also to convey the urine straight out, that it might not wet the lips. The *labia*, or lips, are two in number, by which

which the internal parts are covered: they are constituted to the common teguments of the body, and a great deal of spongy fat: the lower joinings of these lips is in virgins somewhat straight, and seem of a ligamentous substance for firmness, but in married women it is loose, and in such as have had a child still looser. The *fossa* or *rima magna*, begins at the os pubis, and is not much above an inch distant from the anus, which being much larger than the inner chink, or cavity of the neck of the womb, this is seen as soon as ever the lips are drawn aside: in this fossa the lips being opened, two holes appear, (but scarcely visible,) out of which a whitish or wheyish juice issues. In this fossa, are also two collateral chinks, the right and left, which are between the lips and the wings. The *pubes*, called also *monticuli veneris*, in the part where the hair grows, and is properly termed the privy; being longish hillocks, soft, and of a substance the like whereof is not to be found again in the whole body, being partly skin, partly spongy flesh, placed upon a portion of hard fat:

The membranes infolding the child in the womb, are the first things which are bred in the womb after conception, to defend the more excellent part of the seed: their efficient cause is the formative faculty, joined with the heat of the womb: these in human kind are in number only two, viz. the *amnios* and the *chorion*, to which latter belongs the *placenta* or womb-cake. All these together make that which we call secundine, or after-birth. It is so called, because it is the second habitation of the child next the womb; and also because it comes away by a second birth, after the child or first birth. *Amnios* (from its softness and thinness) is the first membrane, it is the thinnest of the tunics, white, soft, transparent, and furnished with some few small veins and arteries, which are dispersed within its foldings. It compasses the child immediately, and cleaves almost every where to the chorion, especially at the ends; and is united in the middle thereof, about the placenta, where the *vasa umbilicalia* come forth, but it is easily separated from the chorion. It contains within it plenty of humidity and humours, in which the child does as it were swim, that so, 1. the child floating therein, may be the higher, and less burthen some to the mother. 2. That the child may not strike against any of the neighbouring hard parts. 3. That the membranes being broke, and this humour running out at time of birth, makes the child's way, through the neck of the womb, smooth, slippery, and easy. This humour, thus falling, is what midwives call the breaking of the water. Part of the *amnios* does now and then hang about the head of the child, and then the infant is said to be born with a caul: some take this for a presage of good, some of evil, some of short life, some of long, but it has relation to none of these things, for it has been found on the heads of both happy and miserable, and of both short and long lived, persons. *Chorion* is the second membrane, and compasses the child like a circle: this immediately

diately compasses the former, and lies beneath it, whose inner and hollow part it envelopes, extending itself according to the magnitude thereof: it is with some difficulty separated from the amnios, and strongly bears and unites the vessels to the placenta. That side next to the child is smooth and slippery; the other side is fixed immediately to the womb by the said placenta, which is commonly on the upper and fore side: it does not encompass the whole child, being constituted of an innumerable company of veins and arteries, between which, blood out of the vessels seem to be shed. The *placenta uteri*, or womb-cake, (because of its shape,) is a round mass of flesh, furnished with divers vessels, through which the child receives its nutriment. Its substance seems to be constituted of an infinite number of little fibres, with congealed blood interposed. It has veins and arteries running through it from the umbilical vessels, which are at length lost about the edges of the placenta, making wonderful contextures, and closely knit to the substance thereof, being joined together by various anastomoses, through which the blood in the child runs back out of the arteries into the veins. It is, first, to be a support to the navel vessels under which it lies: secondly, to prepare blood to nourish the child, as the true liver does in grown persons. This blood it sucks out of the veins of the womb, and, preparing it for use, sends it through the greater umbilical vein to the liver of the child, that so it may be carried to the heart, out of which it is sent by the arteries into the whole body of the child for nourishment.

The umbilical or navel vessels, (so called because, the child being excluded, they are all found to centre in its navel,) are in number four, viz. one vein, two arteries, and the *urachus*; all which are covered with one common membrane or coat, which both incloses all those vessels, and distinguishes them one from another, that they might neither be entangled or broken. The navel vein, passing through the two coats of the peritonæum, is inserted into the liver by a cleft, going through the navel, sometimes single and sometimes double. It is about five feet and a half in length, being measured to the placenta: it is variously rolled or twisted about, that its length might not prove troublesome: from the navel it goes over the breast, from whence it is obliquely carried over the right and left sides of the throat and neck, turning itself back at the hinder part of the head, and so over the middle of the forehead to the placenta: sometimes also it encompasses the neck like a chain, all which you are to understand of the whole cord or navel-string, with the rest of the vessels contained therein. Its use is to convey the maternal blood from the placenta, through the navel, to the child, for its nourishment. In this navel-string there are knots transparent in the veins, but not in the arteries, which are nothing but a more thick and fleshy constitution of the *membrana carnosæ* in those parts:

from the number of these knots midwives pretend to foretel how many children a woman shall have; but these are vain divinations, for there is often more knots in the navel of the last child than of the first. It is about five feet and a half or six feet long, and about the thickness of a man's finger: when it is dry it becomes smaller, and is kept as a precious thing to hasten the birth in other persons. The child being born, this navel-string must be tied with a strong thread wound often about, the distance of two or three inches from the belly of the infant, and about three inches from the binding it must be cut off: afterwards the navel is to be carefully looked to till it is dry, and falls off of its own accord. These vessels, after the child is born, do, within the abdomen, degenerate into ligaments: the vein to a ligament of the liver, and the arteries into lateral ligaments of the bladder, because their use is now abolished, there being no longer any passage of the mother's blood. The *urachus* is a little cord or ligament, by which the bladder is sustained and fastened to to the peritonæum, that, being distended with urine, its neck might not be compressed, which thing also is done by the arteries. Hence it appears, that the urine of a child in the womb is certainly voided by its yard into the membrane amnios, (whence it is that it is so full of water,) a great part of it yet remaining in the bladder, which is the cause that always new-born children are for the first days continually making water. If the urine were not in part thus voided, the bladder would not only be over-stretched, but broken.

To illustrate what has been said, the annexed plate exhibits the kidneys, bladder, and organs of generation, of the human species, both male and female. Fig. 1. represents the male, A. A. are the kidneys; B. B. the glandulæ succenturiatæ; C. C. the emulgent vessels, together with those distributed over the membranes of the kidneys; D. D. the hypogastric vessels, which, branching off from the iliacs, are distributed in the urinary bladder and penis; E. E. the course of the ureters; F. F. the course of the spermatic vessels, in which several appear cut off, being those distributed in the peritonæum; G. the urinary bladder; H. H. the vasa deferentia; I. I. the testicles; K. the urachus cut off; L. the penis erected or distended; M. M. the erector muscles.

Fig. 2. represents the female; in which A. B. denotes the capsulæ atribiliares; C. C. the kidneys; D. D. right emulgent veins; E. E. right emulgent arteries; F. F. vena cava, divided into the iliac branches; G. left emulgent vein; H. left emulgent arteries; I. I. right spermatic vein; K. right spermatic artery; L. left spermatic artery; M. left spermatic vein; N. N. aorta, divided into its iliac branches; O. O. womens testicles; P. P. a part of the broad ligament, or bat's wings; Q. Q. the trumpets of the womb on both sides; R. R. bottom of the womb, shew-

ing the placenta formed, and the embryo perfected; S. S. round ligaments of the womb cut off at the share; T. T. neck of the womb; V. V. venæ hypogastricæ; Y. Y. the passage of the womb; Z. the clitoris and præputium; a. a. a portion of the ureters cut off; b. b. a portion of the ureters descending cut off; c. c. vasa præparentia dilated; d. d. vasa deferentia; e. e. the nymphæ; f. the meatus urinarius; g. g. g. the vagina laid open, with its plicæ: h. h. the uterus, as stretched in the third month of pregnancy, with the placenta adhering to the fundus.

OF THE THORAX.

THE thorax, chest, or breast, is that which is called the middle ventricle, being circumscribed above by the claviculæ; beneath by the diaphragma; on the fore side by the sternum; on the hinder part by the back bones; and on each side by the costæ or ribs. Its situation is between the upper ventricle or head, and the abdomen, being the seat of the vital spirits, and consisting of the parts appointed for cherishing the natural heat. Its figure is almost oval, somewhat flat before and behind, whereas in beasts it is somewhat sharp, so that mankind only lies on the back. Its substance is partly boney, partly fleshy; boney, because it contains not any parts much to be distended; fleshy, because it contains parts which ought to be moved, as the heart and lungs.

The breasts, or dugs, are common to both sexes; in men they are framed of the cutis, the membrana carnosæ, fat, and the nipple, and are called *mammillæ*. The dugs in women have besides many remarkable vessels, glandules, and pipes, to make and contain milk. The nipple or teat, called *papilla*, is spongy, like the glans of a man's yard, and perforated through the middle with many small holes for the milk to pass through. It is rougher than the other parts, that the infant may the more firmly hold it, and of an exquisite sense, that the nurse should find pleasure when she gives suck: round about it there is a circle, called *arcola*; in virgins it is pale and knotty; in nurses, brown; and in old women, black. The veins are two-fold, viz. external and internal: the external arise from the axillary, and are placed under the skin which moves the dugs, and are called *thoracicæ superiores*, the upper breast-veins: these, in women with child and such as give suck, are often seen very blue. The internal arise or descend from the trunk of the axillary vein, or ramus subclavius; and are called *mammariæ venæ*, or dug-veins: these are met by other ascendant veins from the womb, and therefore, the child being born, the blood is carried no longer to the womb, but to the breasts; and hence it is that women which give suck seldom have their courses. How milk is generated and made, the opinions of men are various: some think it to be made of the venal blood, but they are absolutely deceived: some think it to be made only of arterial blood, and these

err also from the truth: others say, it is made of blood and chyle: but our opinion is, that it proceeds from, and is generated of, the chylous juice, and a serous part of the arterial blood: for that the serosity of the arterial blood (and not the substance of the blood itself) does help to generate and constitute the milk, we are induced to believe, not only from the foregoing reason, but because no anastomoses of the arteries with the lacteal pipes of the ducts could ever yet be found out: and truly this opinion Bartholine seems to favour, where he saith, that all the blood which is poured out of the arteries into the breasts, is not turned into milk, but only the more serous or wheyish part thereof; the rest (that which serves for nourishment excepted) running back again, by the veins into the heart.

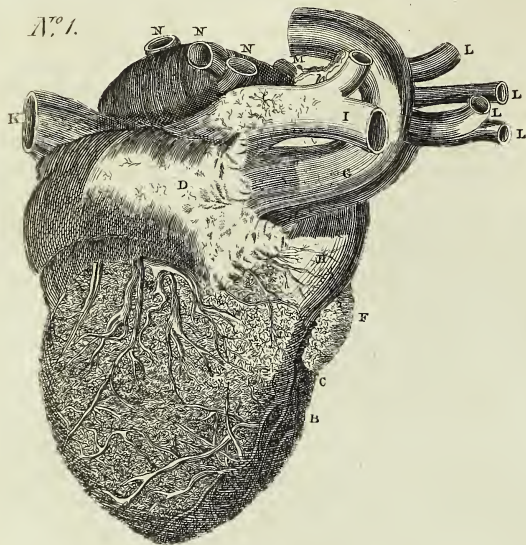
The membrane, called *pleura*, or inner covering of the ribs, is a membrane white thin, hard, and resembling the peritonæum, but thicker and stronger. It arises from the tunics which cover the intercostal nerves proceeding from the back-bone, by means of which it is continued with the coats of the brain: and therefore it is thicker in the back, to whose vertebræ it cleaves as it were inseparably. It is every where double, that the vessels may be carried within the foldings thereof: the inner part, looking towards the lungs and inwards, is thickest, smoothest, and as it were bedewed with a watery humour, that it should not hurt the lungs by any roughness; the outer part is thinner and rougher, that it might cleave the more firmly to the ribs: between these the matter of the pleurisy is many times collected, and not only between the pleura and muscles. As to its figure, it is arched without, hollow within; above it is narrower, below broader, principally towards the sides. From it arise some nervous fibres, by which the lungs are tied to it; if these be too straight, the motion of the lungs is hindered, which causes an incurable difficulty of breathing. Its uses are to cover the whole cavity of the thorax, and render it smooth, that the lungs might not be hurt; and to wrap in all the vital parts, and to defend them from all external injuries. The *mediastinum* is a membrane standing in the middle of the breast, dividing the right side from the left. It arises from the *pleura*, being a double membrane. Its substance is membranous, yet softer than the *pleura*; its exterior part is rougher, because of the fibres, by which it is knit to the *pleura*; but its inner side, towards the lungs, is smooth; and about the vessels it is commonly full of fat like the caul. The uses of the mediastinum are, first, to divide the thorax into two parts, that, the breast and lungs being hurt or wounded on one side, the other might be safe: secondly, to hold up the pericardium firmly, wherein the heart is contained, that it should not rest upon the back-bone, when we lie upon our back; or, that it should fall upon the breast-bone, when we bend ourselves towards the ground; nor touch the ribs, when we lie upon our sides: thirdly, to give a safe passage to the vessels which run through it; as also to sustain the midriff, lest it should, by the weight of the bowels, be drawn too much downwards. The

The *pericardium*, or *cystis* of the heart, is a membrane encompassing the whole heart, whose pyramidal figure it hath. It is so far distant from the heart as is sufficient to give way for the motion of the same, and to contain the watery humour. It has two membranes, one exterior from the mediastinum, tied before and behind to the *pleura*, and is fibrous; and one interior, from the external tunics of the vessels of the heart; for within the pericardium, the vessels want their common tunicle, it having been spent upon the pericardium. The original therefore of the pericardium is at the basis from the tunics which compass the vessels of the heart, which proceed from the *pleura*. It is connected circularly to the mediastinum, and the neighbouring parts, with many fibres; but especially to the nervous circle of the diaphragma, to which it cleaves so exceeding fast, that it cannot be separated from it without rending; whereby the motion of the heart is directed. Within this pericardium (besides the heart) is contained a serous or watery humour, transparently clear, and in some like water wherein flesh has been washed: in taste it is neither sharp, salt, nor acid. It proceeds out of the vessels of the heart, being a watery part of the blood, as lymph, and other juices, which go to their proper receptacles. The use of this juice is to cool and moisten the heart, and to make it slippery, thereby to facilitate its motion: also, that the heart, by swimming therein, may be less ponderous, and not strike against any part. Those who have this humour consumed have their hearts dry; if it be in too great a quantity, it causes a palpitation of the heart, and suffocation, and death follows therefrom; if it be quite consumed, a consumption of the body happens.

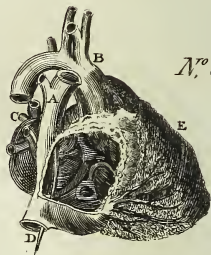
The heart is a muscular body, included in the pericardium and situated nearly in the middle of the breast, between the lobes of the lungs; being the primary organ of the circulation of the blood, and consequently of life. Its figure is nearly conic, the larger end being called its base, and the smaller end its apex. Its lower part is plane, and the upper part convex. Its situation is nearly transverse, or horizontal; so that its base is in the right, and its apex, with the greatest part of its bulk, is in the left, side of the thorax; and consequently it is there that the pulsation is felt. The plane surface of the heart lies on the diaphragm; the convex one is turned upwards. The heart is connected, 1st, by the intervention of the pericardium with the mediastinum, and with a large part of the middle of the diaphragm; this is contrived by nature, to prevent its being displaced, inverted, or turned too rudely about, in consequence of the various motions of the body. 2. Its base is connected to its common vessels: but its apex is free, and is received in a kind of cavity in the left lobe of the lungs. The length of the human heart is about six fingers breadth; its breadth at the base is about five fingers; and its circumference about thirteen.

It

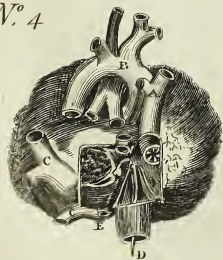
N^o 1.



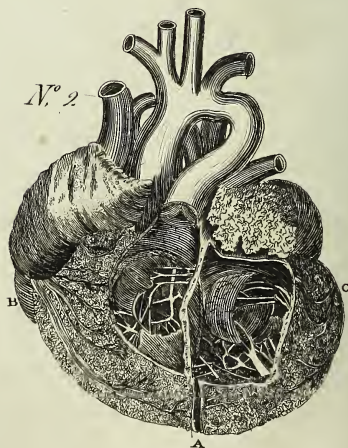
N^o 3.



N^o 4



N^o 2



The Human Heart.

It is, both externally and internally, surrounded with a smooth membrane. There is a quantity of fat about it, which covers its base and its apex, and serves for lubricating it, and for facilitating its motion. Its blood-vessels are of two kinds, common and proper; its common or peculiar vessels being the coronary arteries and veins. The common vessels of the heart are two veins, called the *vena cava*, and the *vena pulmonalis*; and two arteries, the pulmonary one and aorta. The nerves of the heart are small, and arise from the par vagum and intercostals: the auricles are two. There are also two cavities in the heart, called its ventricles: of these the right is thinner and weaker in its circumference, but usually much more capacious, than the left: it receives the blood from the vena cava and the right auricle, and delivers it into the pulmonary artery, to be carried to the lungs. The left ventricle is much stronger and thicker in its sides; but it is narrower and smaller than the right: it receives the blood from the pulmonary vein, and the left auricle, and extrudes it very forcibly into the aorta. The right ventricle is in the anterior part of the thorax; so that they might be called the anterior and posterior ventricles, much more properly than the right and left. There are in the sides of both the ventricles of the heart, and of both its auricles, several *columnæ carneæ*, or *lacertuli*, with furrows between them, seeming so many small and distinct muscles; and, from the concurrence of the tendinous fibres of these in the heart, there are formed peculiar membranes situated at the orifices of the auricles of the heart: and there are also other columns of this kind, which run transversely from one side of the ventricles to the other: these serve partly to assist the contraction of the heart in its systole, and partly to prevent its too great dilatation in its diastole. The *valvule* of the heart are of three kinds. 1. The *tricuspidales*; these are three in number, and are situated at the ingress of the vena cava in the right ventricle. 2. The *mitrales*; these are two, and are situated in the left ventricle at the ingress of the pulmonary vein: these serve to hinder the ingress of the blood from the heart into the veins again, while they are constricted. 3. The *semilunar* ones; these are three, and are situated at the organ of the aorta and pulmonary artery, and serve to prevent the reflux of the blood from them into the heart: these, for the sake of strength, are furnished with a number of fleshy fibres and spheroidal corpuscles. The orifices of the veins of Thebesius and Verheyen, in the hollows of the heart, are for carrying back the blood from the substance of the heart to its cavities. The fibres of the heart are of a muscular substance, and of a most amazing fabric. They are of two kinds, 1. straight ones in the left ventricle; and, 2. spiral ones, common to both ventricles, and of two orders. The exterior ones run to the left, from the base of the heart: the interior ones run to the right, and intersect the others; and, when they act, they closely constrict the cavities of the heart, and drive out the blood from them.

According to this fabric, the heart may be resolved into two muscles, each of which constitutes one of its ventricles. The use of the heart is for the circulation of the blood: it receives the blood from the veins, running from all parts of the body; and propels it again, by its own motion, to all those parts, through the arteries. On this depend life itself, the preservation of the frame, and the motions and actions of all its parts. But, that the reader may have as distinct an idea as possible of this primary organ of life, we shall lay before him several views of it in the plate annexed; where No. 1. represents the human heart seen in its convex part, and in its natural situation; B marks the branches of the coronary vein; C, the coronary artery; D, the right auricle; E, branches of veins going from the right auricle; G, the trunk of the aorta; H, the trunk of the pulmonary artery; I, the ascending trunk of the vena cava; L, L, &c. branches of the aorta, rising upwards; M, one of the branches of the pulmonary artery; N, N, &c. branches of the pulmonary vein. No. 2. represents the heart opened, to shew the structure and form of its ventricles; where A expresses the muscular septum, or partition, which divides the ventricles; B, the right ventricle opening into the right auricle, and into the trunk of the pulmonary artery; C, the left ventricle, opening into the left auricle, and into the great trunk of the aorta. No. 3. and No. 4. represent the heart in different positions; where A marks the ascending trunk of the vena cava; B, the trunk of the aorta; C, branches of the pulmonary vein; D, the descending trunk of the vena cava; and E, part of the right auricle, cut away, to shew the different arrangement of the internal fibres and venous ducts.

The lungs, or lights, are the instruments of breathing, and are the largest viscus of the thorax: they are situated in the two sides of it, with the heart, as it were, between them: and are connected, by means of the mediastinum, with the sternum and vertebræ; with the heart, by means of the pulmonary vessels, and immediately with the aspera arteria. The colour of the lungs, in infants, is a fine florid red; in adults, it is darker; and in old people, livid, or variegated, with black and white. When inflated, they have some resemblance to the hoof of an ox; and are convex on the upper side, and concave underneath. They are divided into two large lobes, the right and left; the left, which is the smaller, is divided again into two; and the right, which is larger, into three small ones. The membrane with which the lungs are surrounded is continuous with the pleura. The substance of the lungs is spongy, or vesiculous, and they seem, indeed, entirely composed of a number of small vesicles of a fleshy texture, and of a variety of vessels. The vessels of the lungs are the *bronchia*, the *bronchial* artery and vein, the nerves, and the lymphatics. The uses of the lungs are, 1. To perform the office of respiration, by which the blood is attenuated in the plexus of the arteries called the *rete vasculosum*. 2. To be assistant

assistant to the voice in speaking, and to the sense of smelling. They are also emunctories of the blood, and are of many other important services. The principal diseases to which the lungs are subject, are the Asthma, Consumption, Peripneumony, &c.

OF THE GENERATION AND CIRCULATION OF THE BLOOD.

THE origin of the blood is in the chyle, which, passing the lacteals, is delivered into the subclavian; where, mixing with the blood, they proceed together to the right ventricle of the heart; and there, being yet more intimately mixed, they circulate together through the whole body: till, after several circulations, and secretions at the several strainers of the body, they are assimilated, so as to make one uniform compound mass, which appears to be nothing else but chyle altered by the artifice of nature, and exalted into blood; there being no appearance of any thing extraneous mixed with the liquor circulating in the blood-vessels, but chyle; excepting what had been before separated from it, for some particular purposes, which being once served, it is returned to it again: unless, perhaps, it may receive some portion of air in the lungs.

The blood, while in its vessels, appears to the naked eye uniform and homogeneous; but, when let out and cold, it separates spontaneously into two different parts, the one red and fibrous, which coheres into a mass, and is called the *cruur*; the other thin and transparent, which retains fluidity when cold, and, being supposed specifically heavier than the other, sustains and bears it up, and is called the *serum*. If the red part of the blood bears too great a proportion to the serum, which is the case of athletic persons, and others who do not take a sufficient quantity of drink with their meat, the fault may be corrected by lessening the meat, or by increasing their drink. In the beginning of fevers, the proportion of the red part of the blood to the serum is greater, and at the end of them less, than it is in health. The change of this proportion is owing to persons under this disorder living wholly on drink and liquid nourishment; and bodies loaded with serous moisture, being an argument of too small a proportion of the red part of the blood to the serum, have been freed from their load by abstaining wholly from drink. There are other causes besides the bare quantities of meat and drink, which vary the proportion of the red part of the blood to the serum; for this proportion is greater in country-people than in citizens, in persons who use exercise than in persons who are inactive, and in persons who live upon flesh meats and fermented liquors than in persons who live upon vegetables and water. In short, this proportion is increased by things which dry the body and strengthen the fibres; and lessened by things of a contrary nature. Too great a proportion of the red part of the blood to the serum renders bodies subject to inflammatory

matory fevers on taking cold. The blood is found to consist chiefly of phlegm, as the basis or vehicle; for, from the best experiments it appears, that in seven ounces of human blood, there are five ounces two drachms of phlegm, three drachms of a subtil spirituous oil, a small quantity of a thicker oil, two drachms of salt, and about two of earth. From these constituent parts of the blood, variously combined and distributed by the circulatory motion impressed by the heart, and by the oscillatory expansive motion of the interspersed air, and the re-action of the contractile vessels, flow all the properties and operations of the blood. From this mixture of elements, and their lax composition, it becomes susceptible of various alterations and impressions; the principal whereof are, coagulation, which usually attends it out of the body, sometimes in it, and scarce ever without an artificial procurement, but always mortal: and dissolution, which is just opposite to the former, and consists in such a comminution of the fibrous parts of the blood as indisposes it for a separation of the crur from the serum. This is frequently the consequence of malignant and pestilential fevers, &c. and is likewise occasioned by some kinds of poisons.

The circulation of the vital blood is performed through the arteries: and its course is from the heart towards the extremes of the body: and this from every part of the body, internal and external; still out of a wider part into a narrower, out of the trunk into the branches. And it is on this principle alone, that all the blood may be derived into an artery, and evacuated at it. For it is evident, that all the arteries of the body are continually bringing the blood from the left part of the heart, through the trunks of the arteries, into the branches; and on the contrary, that all the veins, excepting the porta, are perpetually bringing back the blood from the extreme parts into the heart. The blood being arrived here, its motion or circulation is continued as follows. The auricles of the heart, being large hollow muscles, are furnished with a double series of strong fibres proceeding with a contrary direction to two opposite tendons, the one adhering to the right ventricle, the other to the sinus venosus: as also with innumerable veins and arteries; by the contractile force of these auricles, the blood is vigorously expressed, and driven into the right ventricle; which, upon this contraction, is rendered flaccid, empty, and disposed to admit it. If now the right ventricle, thus full of blood, by the contraction of its fibres press the blood towards the aperture again, venous blood, at the same time pouring in, will drive it back again into the cavity and mix it more intimately; till rising up against the parietes, it raises the valvulæ tricuspidæ, which are so connected to the fleshy columns extended on the opposite side, as that when laid quite down they cannot close the parietes of the right ventricle: these it thrusts towards the right auricle, till being there joined they stop the passage very closely, and prevent any return. By the same means the same blood rises up into the three semilunar valves, placed

placed in the extremity of the other mouth, and lying open to the pulmonary artery: these it shuts close against the sides of the artery, and leaves a passage into the artery alone. The venous blood, therefore, that is, the blood of the whole body, continually moves out of the *sinus*, or trunk of the *vena cava*, through the right auricle and right ventricle, into the pulmonary artery, in a continued and forcible stream. The blood carried by this artery into the lungs, and distributed by its branches through the whole substance thereof, is first admitted into the extremities of the pulmonary vein, called *arteria venosa*; whence, passing into four large vessels, which unite together, it is brought to the left *sinus venosus*, or trunk of the pulmonary vein; by the force of whose musculous structure it is driven into the left ventricle, which on this occasion is relaxed, and by that means prepared to receive it. Hence, as before, it is driven into the left ventricle, which is relaxed by the same means; and the *valvule mitrales* opening, admit it into the left ventricle, and hinder its reflux into the pulmonary vein. From hence it is forced into the *aorta*; at whose orifice there are three semilunar valves, which also prevent a reflux by closing the same. And thus is circulation effected; all the blood sent into the lungs, and received in the *arteria venosa*, *sinus venosus*, left auricle and ventricle, being here continually propelled into the *aorta*, whose ramifications are spread throughout all the rest of the body, with a violent motion. Thus is all the blood, in its return from every part of the body, internal and external, and from every part of the heart and its auricles, impelled into the right ventricle; out of that into the lungs; thence into the left ventricle, and thence through the whole extent of the body; and thence again brought back to the heart.

In a *fetus*, the apparatus for the circulation is somewhat different from that above described. The *septum* which separates the two auricles of the heart, is pierced through with an aperture, called the *foramen ovale*; and the trunk of the pulmonary artery, a little after it has left the heart, sends out a tube in the descending *aorta*, called the communicating canal. The blood in the lungs of the *fetus* has none of the advantages of air or respiration; which yet being necessary, nature, it is supposed, takes care that it receives a portion of air, mixed together with its mother's blood, and transmitted to it by the umbilical vessels, to be diffused through the body. This is confirmed hence; that, by constringing the navel-string very tight, the child dies like a man strangled; which appears to be owing to nothing but the want of air. Add to this, that, as soon as the mother ceases to respire, the *fetus* expires.

As to the velocity of the circulating blood, and the time wherein the circulation is completed, several computations have been made. By Dr. Keill's account, the blood is driven out of the heart into the *aorta*, with a velocity which would carry it

fifty-two feet in a minute; but this velocity is continually abated in the progress of the blood through the numerous sections, or branches, of the arteries; so that before it arrives at the extremities of the body, its motion is infinitely diminished. The space of time wherein the whole mass of blood may ordinarily circulate, is variously determined. Some of the latest writers state it thus: supposing the heart to make 200 pulses in an hour, and that at every pulse there is expelled an ounce of blood; as the whole mass is not ordinarily computed to exceed 24 pounds, it must be circulated seven or eight times over in the space of an hour. The *impetus*, occasioning the circulation, is great enough in some animals to raise the blood six, seven, or eight, feet high from the orifice it spins out at; which, however, is far exceeded by that of the sap of a vine in bleeding-time, which will sometimes rise upwards of forty feet high. The heat and motion of the blood are always greater, from a greater activity in the soul, in the day than in the night; and they are likewise ever greater from the food taken in the day-time, for the pulse is always quicker after eating than before it; after a full meal than after a spare one; and after a meal of drier and stronger food, than after a meal of food that is moister and weaker.

OF THE P U L S E S.

THE *pulse* is that reciprocal motion of the heart and arteries, whereby the warm blood, thrown out of the left ventricle of the heart, is so impelled into the arteries, and so distributed throughout the whole body, as to be perceived by the finger. It is certain, that life, health, and the due order of the whole body, depend upon a proper and equable circulation of the blood and humours through the solid parts; so that, the better regulated and the more equable the circulation is, the more perfectly nature preserves herself, and cures the diseases incident to her; and, on the contrary, the more this circulation recedes from a due and equable state, the weaker nature is found to be, and the more subject to misfortunes and diseases. Now every one must own, that the circulation of the blood cannot be better investigated than by feeling the pulse, not in a superficial manner, but for a sufficient time: for the pulse not only discovers the imperfections and strength of the whole body, but also the nature of the blood, and state of the various secretions. And, as a pendulum of a clock, by its equable and regular vibrations, manifests the worth of the clock, so the pulse discovers the habit of the patient, and the vigour or deprivation of all the functions.

A moderate, constant, and equal, pulse, is the rule and measure by which we are to judge of the rest. A moderate pulse, is that which is large, but neither quick nor slow, hard nor equal: this is the pulse with which all others ought to be compared, and which denotes the best state of health, the absence of all preternatural
and

and foreign things, and a due and temperate degree of heat : for, when such a pulse is present, the fluids are duly spirituous, the fibres possessed of their natural tone, the blood temperate and fluid, and consequently the transpiration free, the nutrition good, the animal functions vigorous, the secretions duly carried on, and the patient in a state of good health. But, when the pulse is quicker, and consequently more frequent than usual, it indicates a preternatural irritation of the heart, as the ancients express it, unless it proceeds from external causes. But, if such a pulse continues long, it infallibly denotes a disorder accompanied with an increase, and even a fever. It is generally produced by an intestine motion of the blood, and a change induced on the crasis of the spirits, by an admixture of heterogeneous and often caustic particles. When the pulse is vehement, and at the same time quick, it indicates a feverish intemperature, an admixture of something heterogeneous with the blood, lymph, and spirits ; but at the same time a large quantity of health and spirits. If a vehement and quick pulse is also large, the circulation of the blood is brisk, the heat and thirst great, and the whole habit red and turgid. Where the pulse is small, and little blood is conveyed from the heart to the arteries, and from the veins to the heart, the circulation of the blood is faint and languid. Hence the transpiration and secretions are but small, and the strength little : but, if a small pulse is at the same time weak, frequent, and quick, it denotes a great languor of the strength, a preternatural intestine motion, and a weak circulation of the blood ; and, if this species of pulse continues long, it indicates malignity and great danger.

A slow pulse generally denotes a visciditv, thickneps, and weak circulation, of the blood, together with a languor of the secretions ; but, if it is at the same time weak, it is dangerous, and raises a suspicion of a total loss of strength. But a pulse which is slow and large denotes sufficient remains of strength, tension, and thickneps of the fibres of the heart and arteries ; and a viscid and tenacious blood. All unequal pulses are very bad, since they denote that there is neither a due influx of the spirits, nor a proper and equal mixture of the blood ; but particularly such pulses always prognosticate unlucky events, when they are weak. Intermittent pulses are also of a bad kind, or generally accounted the presages of death. But it is not universally so ; for an intermittent pulse frequently happens without danger, where, for instance, the symptoms are of a bad kind, and the patient's strength still entire. Hence this species of pulse frequently happens in hypochondriac and melancholic patients, where the intestine motion of the blood is diminished by its thickneps. But, when the pulse is weak and quick at the same time, it generally prognosticates death. An hard pulse generally indicates pains, spasms, and convulsions, because the fibres of the heart and arteries are spasmodically constricted. The irregular, caprizing,

caprizating, and discontinued, pulses, denote a very bad state of the body, both with respect to the fluid and solid parts.

It is carefully to be observed, that one kind of pulse is not found in all persons; for the pulse depends on the tone of the muscular fibres, on the influx of the spirits, and the nature and temperament of the blood; and, as all these are surprisingly various in human bodies, with respect to age, sex, the season of the year, the climate, the method of life, the sleep, and the passions of the mind, so also the pulses vary from each other according as these circumstances differ. Thus men generally have a large and vehement pulse, and women one of a more slow and weak kind; for the former have stronger fibres and a hotter blood than the latter. For this reason also, the circulation of the blood is brisker in men than in women; and the former do not generate such loads of redundant blood and humours as women, who are generally weaker, and more subject to diseases. Choleric persons, and those of sanguineo-choleric constitutions, have a larger, quicker, and more vehement pulse, than phlegmatic and melancholic persons; for which reason the fluids move more quickly, the excretions are made more expeditiously, and the blood is more fluid, in the former than in the latter; for the blood of the former is impregnated with a larger quantity of oleous and sulphureous parts, which are the source and matrix of heat and spirituous quantity. Thus also, those of a slender habit, who have strong fibres, and large vessels, have a larger and stronger pulse than those who are fat, have lax fibres, and narrow vessels. Hence they are also sounder, more robust, and more capable of enduring fatigue. This is also the reason why those who are naturally thick and fat are more readily seized with sickness, and destroyed by it, than those of slender habits. In infants and children, the pulse is frequent and soft; whereas, in old persons, it is slow and large, whilst in young persons, and those full grown, it is large and vehement; for generally infants and children generate a larger quantity of humours (which are necessary to their growth), and collect a great deal of fœdes, which is the reason why infants and children are more generally seized with sickness, and more readily die of it, than youths and adults. Old persons have thick blood, but rigid fibres; for which reason their pulse is hard, and makes a forcible impression on the touch; but in infants and children the pulse is soft, on account of the tenderness and laxity of the fibres. The pulse is also changed by the season of the year, the exercise of the body, the aliments, and the affections of the mind. In the middle of the spring, the pulse is large and vehement; at this season also the strength is greatest; for which reason persons are at that time most rarely sick, and recover most easily: in the middle of the summer the pulse is quicker and weaker, because by the intense heat the strength is impaired, whilst the intestine motion of the fluids is greater than it usually is. In autumn the pulse is slower, softer, and weaker, than

the middle of the summer, those which are cold to the winter, and such as are temperate to the spring.

Exercise increases the pulse, and consequently the circulation of the blood, whilst an idle and inactive state renders the pulse slow, weak, and languid, and diminishes the circulation of the fluids. Spirituous aliments render the pulse large, and vehement, and frequent. The pulse of such as are asleep is slow, small, and languid; but, as soon as they awake, it forthwith becomes large, quicker, and stronger; the pulse of those who are angry is large, vehement, and quick; that of such as are frightened, frequent, small, and inactive; and of those who are sorrowful, small, languid, and slow; hence the common and ordinary affections of the body change the pulse, so that, without duly adverting to these affections, the pulse cannot be certainly understood, nor can it be determined how far it recedes from a natural state in consequence of diseases.

The natural pulse is therefore to be felt and to be observed, not immediately after exercise, bathing, immoderate eating, drinking wine, or other causes which exagitate the heart and spirits; for we are to determine nothing about the pulse till the force of external causes has ceased, and all perturbations of the body are allayed; for the pulse is the most certain sign and criterion for judging of the motion of the heart and blood; but, if the pulse alone is observed, without paying a due regard to other circumstances, it may lay a foundation for forming a false judgment; since the pulse may be disturbed by a thousand abstract causes.

All authors, both ancient and modern, agree, that a frequent pulse, in every species of fever, whether continual or intermittent, whether benign or malignant, whether in its beginning or at its height, proves such a fever to be present; hence the quick or frequent pulse is considered as the true essential sign of fevers; but this frequency is either greater or less, and associates itself with the great or vehement, or with the small and weak, according to the diversity of fevers, and the times of the disease. A frequent pulse, when weak and small, is scarcely ever good; since it denotes a languid and slow circulation of the blood; but a frequent, large, and vehement, pulse, such as is generally observed in the height of continual fevers, denotes a brisk circulation of the blood, and an increased heat of the body. In investigating the cause of a frequent pulse, which is generally preternatural, and accompanies several disorders, we shall follow the accurate Bellini, who accounts for the motion of the heart from the influx of the blood through the coronary arteries, and of the nervous fluid through the nerves, into the fibres of the heart; whence he concludes, that the muscles of the heart are most frequently moved when the nervous fluid is most frequently conveyed into them, which happens when it is forced into them by a sufficient quantity of blood flowing forcibly into the brain. Now, by a fre-

quent contraction of the heart a frequent pulse is produced, which indicates that a proper quantity of blood is conveyed to the brain, and that the brain is forcibly pressed, which will happen, either when the blood stagnates therein, in consequence of an obstruction of its veins, or when the blood, contained in these veins, cannot flow in other parts, or in the lungs; or when the blood is thrown into a state of effervescence, by which it assumes a tendency to move in every direction with a greater impetus, and by that means presses the brain more powerfully; the muscles of the heart also move more frequently when irritated by any stimulus. If, therefore, the blood is too acid or hot, so as to stimulate the sinuses of the heart, the heart will be more frequently contracted, and the frequency of the pulse will indicate a stimulating quality in the blood.

Since from the pulse we thus form a judgment not only of the circulation and temperature of the blood, but also of the motion of the spirits, and the strength of the patient, so the knowledge of the pulse, and a due attention to it, becomes of singular service, not only in investigating the nature of disorders, and forming a right judgment concerning them, but also in prescribing medicines for their cure. But they must be carefully, not superficially, consulted. The physicians of China are far more careful in this respect than those of Europe; for the Chinese often spend a whole hour in feeling the pulse, whilst the English physicians have hardly patience to feel above two pulsations; a practice highly culpable, since, after ten strokes of the artery, an inequality or intermission often occurs, which happens when the unequally mixed blood passes through the heart. The pulse is also to be felt in both wrists, in the neck, and in the temples; since it is certain, from experience, that the pulse in the wrists frequently varies, and may be more commodiously felt in one than another. We ought also to advert to the pulses of other parts; thus, sometimes hypochondriac patients perceive a large pulse under the ribs on the left side, which happens when a quick and viscid blood, exagitated by heat, or any other cause, endeavours to procure a quick passage through the pancreas and spleen, but, stopping in their narrow vessels, produces a pulsation, and a kind of pricking pain.

In continual and malignant fevers a large internal pulsation in the veins of the head generally denotes a subsequent delirium; since it is a sign that the blood there congested circulates slowly, till at last, becoming stagnant, it produces a violent inflammation of the meninges. If a large pulse arises from an excessive ebullition of the blood, so that in fevers the veins of the temples beat, and the face is turgid, without a softness of the præcordia, there is reason to suspect that the disease will be long, and that it will not terminate without a large hæmorrhage from the nose, an hiccough, convulsions, or sciatic pains. The reason of this is, that the redundant blood seeks for an outlet either by the nose or the hæmorrhoidal veins; and the sooner this happens, the sooner the patient is free from his disorder.

When a pulsation is observed in any part of the body, where at other times it is not felt, we may certainly conclude, that the part is inflamed and disposed to a supuration, especially when it is accompanied with tumour and pain. An hard pulse is almost an infallible sign in the membranous parts; for this hardness of the pulse, or excessive tension and vibration of the artery, indicates something of a spasmodic nature, arising from the consent of the parts, and produced by the inflammation and pain. The pulse of persons labouring under disorders of the breast, or a palpitation of the heart, is frequent, unequal, and languid; but such a pulse, unless when vehement, is accompanied with no preternatural heat, and happens because the blood does not pass through the sinuses of the heart and the lobes of the lungs. In weakness, and a disposition of syncope, the pulse is generally small, rare, and languid; but, if the pulse is absolutely imperceptible, the body covered with a cold sweat, and the functions of the mind are not totally destroyed, I have observed, that the patient infallibly dies in six hours: and such a situation I have seen produced by corrosive poison. It is to be observed, that about the critical times in fevers, when nature endeavours to throw off the superfluous and peccant matter by stool or sweat, the pulse, though languid, is yet more regular and less frequent, which is a certain sign of recovery. But, if the pulse is soft and undulating, it is a sign that a salutary and critical sweat is just coming on.

It is also to be observed, that the pulse is changed by medicines. Thus, after drastic purgatives, which procure too many stools, the pulse is generally preternaturally quick. After venæsection, especially in plethoric habits, the pulse becomes quicker, a sign that the circulation of the blood, in consequence of its having a larger space, is happily increased, since by this means a suppression of the menses or hæmorrhoides is generally removed. It is certain, not only from the authority of Sydenham, but also from experience, that, after the use of chalybeats, the pulse is quicker, the face redder, and the heat greater. Strong sudorifics, composed of volatile oleous substances, greatly increase the pulsation of the heart and arteries; on the contrary, anodynes, opiates, preparation of nitre, precipitating powders, acids, and such things as diminish the intestine motion of the blood and fix its sulphur, render the pulse calm and moderate in pains, inflammations, and febrile intemperature. Some very useful and important rules for the exhibition of medicines are drawn from the state of the pulse: thus purging and vomiting are contra-indicated by a too quick and vehement pulse; for, when the blood is in a violent motion and ebullition, the secretions are generally very languid. If the strength is defective, which may be known by the languid state of the pulse, emetics and purgatives diminish the strength still more; so that the physician ought to consult the pulse before he exhibits them. For when the pulse is strong, and the motion of the blood regular, these artificial evacua-

tions

ations are most beneficial, and succeed best. The same caution is necessary in the exhibition of sudorifics and all analeptics, which convey heat and motion to the blood; for, if the pulse is strong and frequent, such spirituous substances do more injury than good; they rarefy the blood too much, and accelerate its intestine motion; by which means a delirium and other inflammations are frequently brought on. Great circumspection and attention to the pulse is also requisite in the exhibition of narcotics or opiates; for, as these are possessed of a power of stopping the motion of the blood and spirits, and consequently of impairing strength, so they ought never to be exhibited when the pulse is weak, languid, and small, but are to be avoided like poison.

OF DISEASES IN GENERAL, THEIR PREVENTION, AND CURE.

DISEASE introduced the art of Medicine, which in a primitive sense, communicates the means of preserving health when present, and of restoring it when lost. If we look back into the origin of the medical art, we shall find its first foundations to be owing to the accidental events, and natural instinct. In the early ages, the sick were placed in cross ways, and other public places, to receive the advice of such passengers as knew a remedy suitable to their complaints; and, the better to preserve the memory of every remarkable cure, both the disease and the remedy were engraved on pillars, that patients in the like cases might resort to them for instruction and relief. Hence an insight into the virtues of herbs and plants, of metals and minerals, was originally acquired.

As to the part which reason has acted in the improvement of medicine, it seems to have consisted in observing, 1. That diseases attended with particular circumstances, called symptoms, were sometimes cured without the assistance of art, by spontaneous evacuations, as hæmorrhages, diarrhœas, vomitings, or sweats; whence bleeding, purges, and vomits, took their rise. 2. That the patients were often relieved by the breaking out of various tumours; whence arose the application of topical remedies. And, indeed, it is the best method of improving physic, to observe carefully what means nature, unassisted by art, employs to free the constitution from distempers; since many important hints may be thence taken, for the relief of other patients under the like circumstances. He, who would advance the healing art, ought to collect a select treasure of practical observations, rest satisfied with a few but well-chosen medicines, be thoroughly acquainted with their virtues and efficacy in different constitutions and diseases, despise the cumbersome load of recipes with which practical writers of an inferior rank abound, reject the so much extolled medicines of the chemists, and attempt the relief of patients by a proper diet and exercise, and such medicines

dicines as observation and sound philosophy recommend: for to the improvement of anatomy and natural philosophy is much of the success of physic to be attributed. The knowledge of medicines, or suitable remedies, is also highly necessary to those, who, in order to moderate the impetus in acute disorders, make evacuations, blunt acrimony, dilute too thick fluids, condense those that are too thin, brace up too lax parts, and relax such as are too much constricted; they also drive the humours to parts where they will be least prejudicial, upon occasion mitigate pain, and in languors use stimulating medicines. Wine, vinegar, barley, nitre, honey, rhubarb, opium, and other simples, are found both safe and powerful medicines. Sydenham tells us, that all manner of diseases may be cured by bleeding, purging, with a subsequent opiate, and proper regimen. In chronical cases, mineral waters, salts, diaphoretics, soap, mercury, steel, with a few vegetables, and proper exercise, will generally effect the cure. In a word, what is there in the most elaborate preparation, that is worth half the pains taken about it? Mercury, opium, the Peruvian bark, and other simples, with fire and water, are acknowledged as the surest remedies by the ablest masters of the art; and these are found to be more efficacious in that crude state, in which bountiful nature has imparted them to us, than after the most operative and artificial preparations. We can despair of nothing, while we follow simplicity; but the event of intricate labour is fallacious.

Diseases, in this and other countries, often flow from local circumstances; whence they admit of great mitigation, and sometimes of being entirely prevented, particularly if proper and timely means be taken for that purpose. Diseased parents, unwholesome food, confined air, and uncommonly wet, cold, damp, or hot, seasons, are the forerunners of various disorders; and, as these are generally foreseen and known, it should be the duty of every individual to guard against them.

Men are also exposed to particular diseases from the occupations which they follow. Chymists, founders, glass-makers, and several other artists, are hurt by the unwholesome air which they are obliged to breathe. This air is not only loaded with the noxious exhalations arising from metals and minerals, but is so charged with phlogiston as to be rendered unfit for expanding the lungs sufficiently, and answering the other important purposes of respiration. Hence proceed asthmas, coughs, and consumptions of the lungs, so incident to persons who follow these employments. Such artists ought never to continue too long at work; and when they give over they should suffer themselves to cool gradually. They ought never to drink large quantities of cold, weak, or watery, liquors, while their bodies are hot, nor to indulge in any thing that is cold on the stomach.

Miners, and all who work under ground, are likewise hurt by unwholesome air. The air, by its stagnation in deep mines, not only loses its proper spring and other

qualities necessary for respiration, but is often loaded with such noxious exhalations as to become a most deadly poison. Miners are not only hurt by unwholesome air, but likewise by the particles of metal which adhere to their skin, clothes, &c. These are absorbed, or taken up into the body, and occasion palsies, vertigoes, and other nervous affections, which often prove fatal. Fallopius observes, that those who work in mines of mercury seldom live above three or four years. Lead, and several other metals, are likewise very pernicious to the health.

All who work in mines or metals ought to wash carefully, and to change their clothes as soon as they give over working. Nothing would tend more to preserve the health of such people than a strict and almost religious regard to cleanliness. Plumbers, painters, gilders, smelters, makers of white lead, and many others who work in metals, are liable to the same diseases as miners, and ought to observe the same directions for avoiding them. Tallow-chandlers, boilers of oil, and all who work in putrid animal substances, are likewise liable to suffer from the unwholesome smells or effluvia of these bodies. They ought to pay the same regard to cleanliness as miners; and when they are troubled with nausea, sickness, or indigestion, they should take a gentle purge.

Those who follow laborious employments are in general the most healthy of mankind, yet the nature of their occupations, and the places where they are carried on, expose them to some particular diseases. Husbandmen, for example, are exposed to all the vicissitudes of the weather, which, in this country, are often very great and sudden, and occasion colds, coughs, quinseys, rheumatisms, fevers, and other acute disorders. They are likewise forced to work hard, and often carry burdens above their strength, which, by overstraining the vessels, occasions asthma, ruptures, &c.

Such as bear heavy burdens, as porters, labourers, &c. are obliged to draw the air with much greater force, and also to keep their lungs distended with more violence, than is necessary for common respiration: by this means the tender vessels of the lungs are overstretched, and often burst, inasmuch that a spitting of blood or fever ensues. Hippocrates mentions an instance to this purpose, of a man, who, upon a wager, carried an ass; but was soon after seized with a fever, a vomiting of blood, and a rupture. Carrying heavy burdens is generally the effect of mere laziness, which prompts people to do at once what should be done at twice. Sometimes it proceeds from vanity or emulation. Hence it is, that the strongest men are most commonly hurt by heavy burdens, hard labour, or feats of activity. It is rare to find one who boasts of his strength without a rupture, a spitting of blood, or some disease, which he reaps as the fruit of his folly. When the muscles are violently strained, frequent rest is necessary, in order that they may recover their tone; without this, the strength and constitution will soon be worn out, and a premature old age brought on.

Labourers.

Labourers in the hot season are apt to lie down and sleep in the sun. This practice is so dangerous, that they often wake in a burning fever. These ardent fevers, which prove so fatal about the end of summer and beginning of autumn, are frequently occasioned by this means. Fevers of a very bad kind are often occasioned among labourers by poor living. When the body is not sufficiently nourished, the humours become vitiated, and the solids weak; from whence the most fatal consequences ensue. Poor living is likewise productive of many of those cutaneous diseases so frequent among the lower class of people. It is remarkable that cattle, when pinched in their food, are generally affected with diseases of the skin, which seldom fail to disappear when they are put upon a good pasture. This shews how much a good state of the humours depends upon a sufficient quantity of proper nourishment. Poverty not only occasions, but aggravates, many of the diseases of the laborious, and makes them miserable indeed. Here the godlike virtue of charity ought always to exert itself. To relieve the industrious poor in distress, is surely the most exalted act of religion and humanity. They alone, who are witnesses of those scenes of calamity, can form a notion of what numbers perish in diseases, for want of proper assistance, and even for want of the necessities of life.

Soldiers suffer many hardships from the inclemency of seasons, long marches, bad provisions, hunger, watching, unwholesome climates, bad water, &c. These occasion fevers, fluxes, rheumatisms, and other fatal diseases, which generally do greater execution than the sword, especially when campaigns are continued too late in the year. A few weeks of cold rainy weather will often prove more fatal than an engagement. Sailors may also be numbered amongst the laborious. They undergo great hardships from change of climate, the violence of the weather, hard labour, &c. One great source of the diseases of sea-faring people is excess. When they get on shore, after having been long at sea, without regard to the climate, or their own constitutions, they plunge headlong into all manner of riot, and even persist till a fever puts an end to their lives. Thus intemperance, and not the climate, is often the cause why so many of our brave sailors die on foreign coasts. Such people ought not to live too low; but they would find moderation the best defence against fevers, and many other maladies. We have reason to believe, if due attention were paid to the diet, air, clothing, and above all things to the cleanliness, of sea-faring people, they would be the most healthy set of men in the world; but, when they are neglected, the very reverse will happen.

Nothing can be more contrary to the health and nature of man than a sedentary life, yet this class comprehends the far greater part of the species. Almost the whole female world, and, in manufacturing countries, the major part of the males, may be reckoned sedentary. But, though sedentary employments are necessary, yet there

seems to be no reason why any person should be confined for life to these alone. It is constant confinement that ruins the health. A man will not be hurt by sitting five or six hours a-day; but, if he be obliged to sit ten or twelve, in confined air, he will soon become injured in his health. Unwholesome air is the cause of many disorders. Few are aware of the danger arising from it. People generally pay some attention to what they eat and drink, but seldom regard what goes into the lungs, though the latter often proves more suddenly fatal than the former. A sedentary life seldom fails to occasion an universal relaxation of the solids. This is the great source from whence most of the diseases of sedentary people flow. The scrophula, consumption, hysterics, and nervous diseases, now so common, were very little known in this country before sedentary artificers became so numerous: and they are very little known still among such of our people as follow active employments without doors, though in great towns at least two-thirds of the inhabitants are afflicted with them. Instead of multiplying rules for preserving the health of the sedentary, we shall recommend to them the following plan, viz. That every person who follows a sedentary employment should cultivate a piece of ground with his own hand. This he might dig, plant, sow, and weed, at leisure hours, so as to make it an exercise and amusement, while it produced many of the necessaries of life. After working an hour in a garden, a man will return with more keenness to his employment within doors, than if he had been all the while idle. Labouring the ground is every way conducive to health. It not only gives exercise to every part of the body, but the very smell of the earth and fresh herbs revives and cheers the spirits, whilst the perpetual prospect of something coming to maturity delights and entertains the mind. We are so formed as to be always pleased with somewhat in prospect, however distant or however trivial. Hence the happiness that men feel in planting, sowing, building, &c. These seem to have been the chief employments of the more early ages: and, when kings and conquerors cultivated the ground, there is reason to believe, that they knew as well wherein true happiness consisted as we do. In a word, exercise without doors, in one shape or another, is absolutely necessary to health. Those who neglect it, though they may drag out life, can hardly be said to enjoy it. Weak and effeminate, they languish for a few years, and soon drop into an untimely grave.

Every disease may be considered as an assemblage of symptoms, and must be distinguished by those that are most obvious and permanent; for, by a due attention to them, the investigation of diseases in general will be found a much less difficult matter than people are ready to imagine. A proper attention to the patient's age, sex, temper of mind, constitution, and manner of life, will likewise greatly assist, both in the investigation and treatment of diseases. In childhood the fibres are lax
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and soft, the nerves extremely irritable, and the fluids thin ; whereas in old age the fibres are rigid, the nerves become almost insensible, and many of the vessels impervious. These and other peculiarities render the diseases of the young and aged very different, and of course they must require a different method of treatment. Females are liable to many diseases which do not afflict the other sex : besides, the nervous system being more irritable in them than in men, their diseases require to be treated with greater caution. They are less able to bear large evacuations ; and all stimulating medicines ought to be administered to them with a sparing hand. The temper of mind ought to be carefully attended to in all diseases. Fear, anxiety, and a fretful temper, both occasion and aggravate diseases. In vain do we apply medicines to the body to remove maladies which proceed from the mind. When that is affected, the best medicine is to soothe the passions, to divert the mind from anxious thought, and to keep the patient as easy and cheerful as possible. Few things are of greater importance, in the cure of diseases, than cleanliness. When a patient is suffered to lie in dirty clothes, whatever perspires from his body is again reformed, or taken up into it, which serves to nourish the disease, and increase the danger. Many diseases may be cured by cleanliness alone ; most of them may be mitigated by it, and in all of them it is highly necessary both for the patient and those who attend him.

OF FEVERS.

FEVERS are not only the most frequent of all diseases, but they are likewise the most complex : in the most simple species of fever there is always a combination of several different symptoms. The distinguishing symptoms of fever are, increased heat, frequency of pulse, loss of appetite, general debility, pain in the head, and a difficulty in performing some of the vital and animal functions. The other symptoms usually attendant on fevers are, nausea, thirst, anxiety, delirium, weariness, wasting of the flesh, want of sleep, or the sleep disturbed and not refreshing. As a fever is only an effort of Nature to free herself from an offending cause, it is the business of those who have the care of the sick, to observe with diligence which way Nature points, and to endeavour to assist her operations. Our bodies are so framed, as to have a constant tendency to expel or throw off whatever is injurious to health. This is generally done by urine, sweat, stool, expectoration, vomit, or some other evacuation. There is reason to believe, if the efforts of nature, at the beginning of a fever, were duly attended to and promoted, it would seldom continue long ; but when her attempts are either neglected or counteracted, it is no wonder if the disease proves fatal. There are daily instances of persons who, after catching cold, have all the symptoms of a beginning fever ; but, by keeping warm, drinking diluting liquors, bathing the feet in warm water, &c. the symptoms in a few hours disappear, and the

danger is prevented. When fevers of a putrid kind threaten, the best method of obviating their effects is by repeated vomits. Almost every person in a fever complains of great thirst, and calls out for drink, especially of a cooling nature. This at once points out the use of water and other cooling liquors. What is so likely to abate the heat, attenuate the humours, remove spasms and obstructions, promote perspiration, increase the quantity of urine, and, in short, produce every salutary effect in an ardent or inflammatory fever, as drinking plentifully of water, thin gruel, or any other weak liquor of which water is the basis? The necessity of diluted liquors is pointed out by the dry tongue, the parched skin, and the burning heat, as well as by the unquenchable thirst, of the patient. Many cooling liquors, which are extremely grateful to patients in a fever, may be prepared from fruits, as decoctions of tamarinds, apple-tree, orange-whey, and the like. Mucilaginous liquors might also be prepared from marshmallow roots, linseed, lime-tree buds, and other mild vegetables particularly pointed out in the Herbal. These liquors, especially when acidulated, are highly agreeable to the patient, and should never be denied him. In fevers the mind as well as body should be kept easy. Company is seldom agreeable to one that is sick. Indeed every thing that disturbs the imagination increases the disease; for which reason every person in a fever ought to be kept perfectly quiet, and neither allowed to see or hear any thing that may in the least affect or discompose his mind. What food the patient takes should be in small quantity, light, and of easy digestion. It ought to be chiefly of the vegetable kind, as panada, roasted apples, gruels, and such like. The fresh air should likewise be taken as much as possible; it not only removes his anxiety, but cools the blood, revives the spirits, and proves every way beneficial. Amongst common people, the very name of a fever generally suggests the necessity of bleeding. This notion seems to have taken its rise from most fevers in this country having been formerly of an inflammatory nature; but true inflammatory fevers are now seldom to be met with. Sedentary occupations, and a different manner of living, have so changed the state of diseases in Britain, that there is now hardly one fever in ten where the lancet is necessary. In most low, nervous, and putrid, fevers, which are now so common, bleeding is really hurtful, as it weakens the patient, sinks his spirits, &c. We would recommend this general rule, never to bleed at the beginning of a fever, unless there be evident signs of inflammation. Bleeding is an excellent medicine when necessary, but should never be wantonly performed. It is likewise a common notion, that sweating is always necessary in the beginning of a fever. When the fever proceeds from an obstructed perspiration, this notion is not ill-founded. If the patient only lies in bed, bathes his feet and legs in warm water, and drinks freely of water-gruel, or any other weak diluting liquor, he will seldom fail to perspire freely. The warmth of the
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bed, and the diluting drink, will relax the universal spasm, which generally affects the skin at the beginning of a fever; it will open the pores, and promote the perspiration, by means of which the fever may often be carried off. But, instead of this, the common practice is to heap clothes upon the patient, and to give him things of a hot nature, as spirits, spices, &c. which fire his blood, increase the spasms, and render the disease more dangerous. In all fevers a proper attention should be paid to a patient's longings. These are the calls of Nature, and often point out what may be of real use. Patients are not indeed to be indulged in every thing that the sickly appetite may crave; but it is generally right to let them have a little of what they eagerly desire, though it may not seem altogether proper. What the patient longs for, his stomach will generally digest; and such things have sometimes a very happy effect.

OF INTERMITTING FEVERS, OR AGUES.

THE several kinds of intermitting fevers, or agues, take their names from the period in which the fit returns, as quotidian, tertian, quartan, &c. They are generally occasioned by effluvia from putrid stagnated water. This is evident from their abounding in rainy seasons, and being most frequent in countries where the soil is marshy, as in Holland, the Fens of Cambridgeshire, the Hundreds of Essex, &c. This disease may also be occasioned by eating too much stone-fruit, by a poor watery diet, damp houses, evening dews, lying upon the damp ground, watching, fatigue, depressing passions, and the like. When the inhabitants of a high country retire to a low one, they are apt to prove fatal. In a word, whatever relaxes the solids, diminishes the perspiration, or obstructs the circulation in the capillary or small vessels, disposes the body to agues.

CURE.—As the chief intentions of cure in an ague are to brace the solids, and promote perspiration, the patient ought to take as much exercise between the fits as he can bear. If he be able to go abroad, riding on horseback, or in a carriage, will be of great service. But, if he cannot bear that kind of exercise, he ought to take such as his strength will permit. Nothing tends more to prolong an intermitting fever, than indulging a lazy indolent disposition. In this disease, the stomach is generally loaded with cold viscid phlegm, and frequently great quantities of bile are discharged by vomit; which plainly points out the necessity of such evacuations. Vomits are therefore to be administered before the patient takes any other medicine. But, if the patient be afraid to take a vomit, he ought to cleanse the bowels by a dose or two of Glauber's salt, jalap, or rhubarb: after this, two ounces of the best Peruvian bark, finely powdered, may be divided into twenty-four doses. These may either be made into bolusses, as they are used, with a little syrup of lemon, or mixed

in a glass of red wine, a cup of camomile-tea, water-gruel, or any other drink that is more agreeable to the patient. In an ague which returns every day, one of the above doses may be taken every two hours during the interval of the fits. In a tertian, or third-day ague, it will be sufficient to take a dose every third hour during the interval; and in a quartan, every fourth. If the patient cannot take so large a dose of the bark, he may divide each of the powders into two parts, and take one every hour, &c. For a young person, a smaller quantity of this medicine will be sufficient, and the dose must be adapted to the age, constitution, and violence of the symptoms. The above quantity of bark will frequently cure an ague; the patient, however, ought not to leave off taking the medicine as soon as the paroxysms are stopped, but should continue to use it till there is reason to believe the disease is entirely overcome. Most of the failures in the cure of this disease are owing to patients not continuing to use the medicine long enough. They are generally directed to take it till the fits are stopped, then to leave it off, and begin again at some distance of time; by which means the disease gathers strength, and often returns with as much violence as before. A relapse may always be prevented, and the cure greatly facilitated, by using the following infusion for some considerable time as a drink: take an ounce of gentian root; of calamus aromaticus, and orange-peel, each half an ounce, with three or four handfuls of camomile flowers, and an handful of coriander-seed, all bruised together in a mortar; put half an handful of these ingredients into a tea-pot, and pour thereon a pint of boiling water. A large tea-cup full of this infusion should be drunk three or four times a day; by which means a smaller quantity of bark than is generally used will be sufficient to cure an ague. There is no doubt but many of our own plants or barks, which are very bitter and astringent, would succeed in the cure of intermittent fevers, especially when assisted by aromatics; and it is only by the use of sundry of those herbs recommended in the Herbal as antidotes against agues, that many old women in country places so effectually cure the ague, after it has baffled every exertion of the doctor. In obstinate agues, when the patient is old, the habit phlegmatic, the season rainy, the situation damp, or the like, it will be necessary to add to the above two ounces of the bark, half an ounce of Virginian snake-root, and a quarter of an ounce of ginger, or some other warm aromatic; or, if the symptoms be of an inflammatory nature, half an ounce of salt of wormwood or salt of tartar may be added to the above quantity of bark. As autumnal and winter agues generally prove much more obstinate than those which attack the patient in spring or summer, it will be necessary to continue the use of the foregoing medicines longer in the former than in the latter. If agues are not properly cured, they often degenerate into obstinate chronical diseases, as the dropy, jaundice, &c. For this reason all possible care should

should be taken to have them radically cured, before the humours be vitiated, and the constitution spoiled. To prevent agues, people should endeavour to avoid their causes. The following preventive medicine may however be of use to such as are obliged to live in low marshy countries, or who are liable to frequent attacks of this disease. Take an ounce of the best Peruvian bark; Virginian snake-root, and orange-peel, of each half an ounce; bruise them all together, and infuse for five or six days in a bottle of brandy, Holland gin, or wine; afterwards pour off the clear liquor, and take a wine-glass of it twice or thrice a-day. Those who can bring themselves to chew the bark will find that method succeed very well. Gentian root, or calamus aromaticus, may also be chewed by turns for the same purpose. All bitter herbs are antidotes to agues, especially those that are warm and astringent.

OF AN ACUTE CONTINUAL FEVER.

THIS fever is denominated acute, ardent, or inflammatory. It most commonly attacks the young, or persons about the prime or vigour of life, especially such as live high, abound with blood, and whose fibres are strong and elastic. It seizes people at all seasons of the year; but is most frequent in the spring and beginning of summer. It may be occasioned by any thing that overheats the body, or produces plethora; as violent exercise, sleeping in the sun, drinking strong liquors, eating spices, a full diet, with little exercise, &c. It may likewise be occasioned by whatever obstructs the perspiration; as lying on the damp ground, drinking cold liquor when the body is hot, night-watching, or the like.

CURE.---As this disease is always attended with danger, the best medical assistance ought to be procured as soon as possible; and such medicines should be used as are calculated to dilute the blood, correct the acrimony of the humours, allay the excessive heat, remove the spasmodic stricture of the vessels, and promote the secretions. For this purpose let the patient drink plentifully of diluting liquors; as water-gruel, or oatmeal-tea, clear whey, barley-water, baum-tea, apple-tea; which may be sharpened with juice of orange, jelly of currants, raspberries, and such like. If the patient be costive, an ounce of tamarinds, with two ounces of stoned raisins of the sun, and a couple of figs, may be boiled in three English pints of water to a quart. This makes a very pleasant drink, and may be used at discretion. The patient's diet must be very spare and light; and it will afford him great relief, especially in a hot season, to have fresh air frequently let into his chamber. This, however, must be done in such a manner as not to endanger his catching cold. It is too common in fevers to load the patient with bed-clothes, under the pretence of making him sweat, or defending him from the cold. This custom has many ill effects. It

increases the heat of the body, fatigues the patient, and retards, instead of promoting, the perspiration. In this and all other fevers, attended with a hard, full, quick, pulse, bleeding is of the greatest importance. This operation ought always to be performed as soon as the symptoms of an inflammatory fever appear. The quantity of blood to be taken away must be in proportion to the strength of the patient and the violence of the disease. If after the first bleeding the fever should rise, and the pulse become more frequent and hard, there will be a necessity for repeating it a second, and perhaps a third, or even a fourth, time, which may be done at the distance of twelve, eighteen, or twenty-four, hours from each other, as the symptoms require. If the pulse continues soft, and the patient is tolerably easy after the first bleeding, it ought not to be repeated. If the heat and fever be very great, forty or fifty drops of the dulcified or sweet spirit of nitre may be made into a draught, with an ounce of rose-water, two ounces of common water, and half an ounce of simple syrup, or a bit of loaf-sugar. This draught may be given to the patient every three or four hours, while the fever is violent; afterwards, once in five or six hours will be sufficient. If about the tenth, eleventh, or twelfth, day, the pulse becomes more soft, the tongue moister, and the urine begins to let fall a reddish settlement, there is reason to expect a favourable issue to the disease. But if, instead of these symptoms, the patient's spirits grow languid, his pulse sinks, and his breathing becomes difficult, with a stupor, trembling of the nerves, starting of the tendons, &c. there is reason to fear that the consequences will be fatal. In this case blisters must be applied to the head, ancles, inside of the leg or thighs, as there may be occasion; poultices of wheat-bread, mustard, and vinegar, may likewise be applied to the soles of the feet, and the patient must be supported with cordials, as strong white-wine whey, negus, fago-gruel with wine in it, and such like. Should the patient recover, he ought to take some gentle laxative. An ounce of tamarinds, and a drachm of senna may be boiled for a few minutes in a pint of water, and an ounce of manna dissolved in the decoction; afterwards it may be strained, and a tea-cup full drunk every hour till it operates. This dose may be repeated twice or thrice, five or six days intervening betwixt each, and the patient should be kept easy till his strength and spirits are sufficiently recruited.

OF THE PLEURISY.

THE pleurisy is an inflammation of that membrane called the *pleura*, which lines the inside of the breast. It may be occasioned by whatever obstructs the perspiration: as cold northerly winds; drinking cold liquors when the body is hot; sleeping without doors on the damp ground; wet clothes; plunging the body into cold water, or exposing it to the cold air, when covered with sweat, &c. It may likewise be occasioned

caused by drinking strong liquors; by the stoppage of usual evacuations; as old ulcers, issues, sweating of the feet or hands, &c. the sudden striking in of any eruption, as the itch, the measles, or the small-pox. A pleurisy may likewise be occasioned by violent exercise, as running, wrestling, leaping, or by supporting great weights, blows on the breast, &c. The pulse in this disease is commonly quick and hard, the urine high-coloured; and if blood be let it is covered with a tough crust, or buffy coat. The patient's spittle is at first thin, but afterwards it becomes grosser, and is often streaked with blood.

CURE.---Nature generally endeavours to carry off this disease by a critical discharge of blood from some part of the body, by expectoration, sweat, loose stools, thick urine, or the like. We ought therefore to second her intentions by lessening the force of the circulation, relaxing the vessels, diluting the humours, and promoting expectoration. Copious bleeding, in the beginning of a pleurisy, has a much better effect than repeated small bleedings. A man may lose twelve or fourteen ounces of blood as soon as it is certainly known that he is seized with a pleurisy. For a younger person, or one of a delicate constitution, the quantity must be less. If, after the first bleeding, the stitch, with the other violent symptoms, should continue, it will be necessary, at the distance of twelve or eighteen hours, to let eight or nine ounces more. If the symptoms do not then abate, and the blood shews a strong buffy coat, a third, or even a fourth, bleeding may be requisite. But this operation is seldom necessary after the third or fourth day of the fever, and ought not then to be performed, unless in the most urgent circumstances. The blood may be attenuated without bleeding; and the pain of the side abated by fomenting, blistering, &c. Fomentations may be made by boiling a handful of the flowers of elder, camomile, and common mallows, or any other soft vegetables, recommended for this complaint in the Herbal. The herbs may be either put into a flannel bag, and applied warm to the side, or flannels may be dipped in the decoction, afterwards wrung out, and applied to the part affected, with as much warmth as the patient can easily bear. Fomentations not only ease the pain, but relax the vessels, and prevent the stagnation of the blood and other humours. Leaves of various plants might likewise be applied to the patient's side with advantage. I have often seen great benefit from young cabbage-leaves applied warm to the side in a pleurisy. These not only relax the parts, but likewise draw off a little moisture, and may prevent the necessity of blistering plasters; which, however, when other things fail, must be applied. What is called the crisis, or height of the fever, is sometimes attended with very alarming symptoms, as difficulty of breathing, an irregular pulse, convulsive motions, &c. These are apt to frighten the attendants, and induce them to do improper things, as bleeding the patient, giving him strong stimulating medicines, or the like. But they
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are only the struggles of Nature to overcome the disease, in which she ought to be assisted by plenty of diluting drink, which is then peculiarly necessary. If the patient's strength however be much exhausted by the disease, it will be necessary at this time to support him with small draughts of white-wine whey, negus, or the like. When the pain and fever are gone, it will be proper, after the patient has recovered sufficient strength, to give him some gentle purges. He ought likewise to use a light diet of easy digestion, and his drink should be of a cleansing nature.

The *paraphrentis*, or inflammation of the diaphragm, is so nearly connected with the pleurisy, and resembles it so much in the manner of treatment, that it is scarce necessary to consider it as a separate disease. It is attended with a very acute fever, and an extreme pain of the part affected, which is generally augmented by coughing, sneezing, drawing in the breath, taking food, going to stool, making water, &c. Hence the patient breathes quick, and draws in his bowels to prevent the motion of the diaphragm; is restless, anxious, has a dry cough, a hiccup, and often a delirium. Every method should be taken to prevent a suppuration, as it is impossible to save the patient's life when this happens. The regimen and medicine are in all respects the same as in the pleurisy. We shall only add, that in this disease emollient clysters are peculiarly useful, as they relax the bowels, and by that means make a derivation from the part affected.

OF INFLAMMATIONS OF THE LUNGS.

THIS disease is generally fatal to those who have a flat breast, or narrow chest, and to such as are afflicted with an asthma, especially in the decline of life. Sometimes the inflammation reaches to one lobe of the lungs only, at other times the whole organ is affected; in which case the disease can hardly fail to prove fatal. An inflammation of the lungs is sometimes a primary disease, and sometimes it is the consequence of other diseases, as a quinsy, a pleurisy, &c. Most of the symptoms of a pleurisy likewise attend an inflammation of the lungs; only in the latter the pulse is more soft, and the pain less acute; but the difficulty of breathing, and oppression of the breast, are generally greater.

CURE.—Bleeding and purging are generally proper at the beginning of this disease; but, if the patient's spit is pretty thick, as well as concocted, neither of them are necessary. It will be sufficient to assist the expectoration by some of the sharp medicines recommended for that purpose in the pleurisy; blisters ought to be applied pretty early. If the patient does not spit, he must be bled according as his strength will permit, and have a gentle purge administered. Afterwards his body may be kept open by clysters, and the expectoration promoted, by taking every four hours two table-spoonfuls of the solution of gum ammoniac, with oxymel of squills,

squills, &c. When an inflammation of the breast does not yield to bleeding, blistering, and other evacuations, it commonly ends in a suppuration, which is more or less dangerous according to the part where it is situated. When this happens in the pleura, it sometimes breaks outwardly, and the matter is discharged from the wound. If the suppuration happens within the substance or body of the lungs, the matter may be discharged by expectoration; but, if the matter floats in the cavity of the breast, between the pleura and the lungs, it can only be discharged by an incision made betwixt the ribs. If the patient's strength does not return after the inflammation is to all appearance removed; if his pulse continues quick though soft, his breathing difficult and oppressed; if he has cold shiverings at times, his cheeks flushed, his lips dry; and if he complains of thirst, and want of appetite; there is reason to fear a suppuration, and that a consumption of the lungs will ensue; the proper treatment of which we shall next consider.

OF CONSUMPTIONS.

CONSUMPTIONS prevail more in England than in any other part of the world; owing perhaps to the great use of animal food and malt-liquors, the general application to sedentary employments, and the great quantity of pit-coal which is burnt; to which we may add the perpetual changes in the atmosphere, or variable-ness of the weather. As this disease so frequently proves fatal, we shall point out its causes, in order that people may as much as possible endeavour to guard against it: these are, confined or unwholesome air; violent passions, exertions, or affections of the mind; grief, disappointment, anxiety, or close application to study:---great evacuations; as sweating, diarrhoeas, diabetes, excessive venery, the fluor albus, an over discharge of the menstrual flux, giving suck too long:---also the sudden stoppage of customary evacuations; as the bleeding piles, sweating of the feet, bleeding at the nose, the menses, issues, ulcers, or eruptions of any kind. Consumptions are likewise caught by sleeping with the diseased; for which reason this should be carefully avoided; but more consumptive patients date the beginning of their disorders from wet feet, damp beds, night air, wet clothes, or catching cold after the body has been heated, than from all other causes put together. This disease however is sometimes owing to an hereditary taint, or a scrophulous habit; in which case it is generally incurable---yet, let none despair.

CURE.---On the first appearance of a consumption, if the patient lives in any place where the air is confined, he ought immediately to quit it, and to make choice of a situation in the country, where the air is pure and free. Here he must not remain inactive, but take every day as much exercise as he can bear. It is a pity those who attend the sick seldom recommend riding in this disease, till the patient

is either unable to bear it, or the malady has become incurable: patients are likewise apt to trifle with themselves. They cannot see how one of the common actions of life should prove a remedy in an obstinate disease, and therefore they reject it, while they greedily hunt after relief from medicine, merely because they do not understand it. Next to proper air and exercise, a due attention should be paid to diet, which ought to be calculated to lessen the acrimony of the humours, and to nourish and support the patient. For this purpose he should keep chiefly to the use of vegetables and milk. Milk alone is of more value in this disease than the whole *materia medica*. Asses milk is commonly reckoned preferable to any other; but it cannot always be obtained; besides, it is generally taken in very small quantity; whereas, to produce any effects, it ought to make a considerable part of the patient's food. Some extraordinary cures in consumptive cases have been performed by women's milk; and, could it be obtained in sufficient quantity, we would recommend it in preference to any other. It is better if the patient can suck it from the breast, than to drink it afterwards. A man who was reduced to such a degree of weakness in a consumption, as not to be able to turn in bed, sucked his wife's breasts, not with a view to reap any advantage from the milk, but to make her easy. Finding himself however greatly benefited by it, he continued to suck her till he became perfectly well, and is at present a strong and healthy man. Some prefer butter-milk to any other, and it is indeed a very valuable medicine, if the stomach be able to bear it. It does not agree with every person at first; and is therefore often laid aside without a sufficient trial. It should at first be taken sparingly and the quantity gradually increased, until it comes to be almost the sole food. I never knew it succeed unless where the patient almost lived upon it. Wholesome air, proper exercise, and a diet consistent therewith, is the only course that can be depended on in a beginning consumption. If the patient has strength and sufficient resolution to persist in such a course, he will seldom be disappointed of a cure. In the first stage of a consumption, the cough may sometimes be appeased by bleeding; and the expectoration may be promoted by the following medicines. Take fresh squills, gum-ammoniac, and powdered cardamum seeds, of each a quarter of an ounce; beat them together in a mortar, and, if the mass proves too hard for pills, a little of any kind of syrup may be added to it. This may be formed into pills of a moderate size, and four or five of them taken twice or thrice a-day, according as the patient's stomach will bear them. A mixture made of equal parts of lemon-juice, fine-honey, and syrup of poppies, may likewise be used. Four ounces of each of these may be simmered together in a saucepan, over a gentle fire, and a table-spoonful of it taken at any time when the cough is troublesome. It is common in this stage of the disease to load the patient's stomach with oily and balsamic medicines.

dicines. These, instead of removing the cause of the disease, tend rather to increase it, by heating the blood, while they pall the appetite, relax the solids, and prove every way hurtful to the patient. Whatever is used for removing the cough, besides riding and other proper regimen, ought to be medicines of a sharp and cleansing nature; as oxymel, syrup of lemon, &c. For the patient's drink we would recommend infusions of the bitter plants mentioned in the Herbal, such as ground-ivy, the smaller centaury, camomile flowers, water trefoil, &c. These infusions may be drunk at pleasure. They strengthen the stomach, promote digestion, rectify the blood, and at the same time answer all the purposes of dilution, and quench thirst much better than things that are luscious or sweet. But, if the patient spits blood, he ought to use, for his ordinary drink, infusions or decoctions of the vulnerary roots, plants, &c. There are many other mucilaginous plants and seeds of a healing and agglutinating nature, recommended in the Herbal, from which decoctions or infusions may be prepared with the same intention; as the orches, the quince-seed, coltsfoot, linseed, sarsaparilla, &c. The conserve of roses is here peculiarly proper. It may either be put into the decoction above prescribed, or eaten by itself. No benefit is to be expected from trifling doses of this medicine. It seldom proves of any service, unless three or four ounces at least are used daily for a considerable time. In this way I have seen it produce very happy effects, and would recommend it wherever there is a discharge of blood from the lungs. When the spitting up of gross matter, oppression of the breast, and the hectic symptoms, shew that an imposthume is formed in the lungs, the Peruvian bark is the only drug which has any chance to counteract the general tendency which the humours then have to putrefaction. An ounce of it in powder may be divided into eighteen or twenty doses, of which one may be taken every three hours through the day, in a little syrup, or a cup of horehound tea. We would not recommend the bark while there are any symptoms of an inflammation of the breast; but, when it is certainly known that matter is collected there, it is one of the best medicines which can be used. Few patients indeed have resolution enough to give the bark a fair trial at this period of the disease, otherwise we have reason to believe that great benefit might be reaped from it.

A NERVOUS CONSUMPTION is a wasting or decay of the whole body, without any considerable degree of fever, cough, or difficulty of breathing. It is attended with indigestion, weakness, and want of appetite, &c. Those who are of a fretful temper, who indulge in spirituous liquors, or who breathe an unwholesome air, are most liable to this disease. We would recommend, for the cure of a nervous consumption, a light and nourishing diet, plenty of exercise in a free open air, and the use of such bitters as brace and strengthen the stomach; as the Peruvian bark, gentian

gentian root, camomile, horehound, &c. These may be infused in water or wine, and a glass of it drunk frequently. Agreeable amusements, cheerful company, and riding about, are preferable to all medicines in this disease. For which reason, when the patient can afford it, we would recommend a long journey of pleasure, as the most likely means to restore his health. What is called a *symptomatic consumption* cannot be cured without first removing the disease by which it is occasioned. Thus, when a consumption proceeds from the scrophula or king's-evil, from the scurvy, the asthma, the venereal disease, &c. a due attention must be paid to the malady from whence it arises, and the regimen and medicine directed accordingly. When excessive evacuations of any kind occasion a consumption, they must not only be restrained, but the patient's strength must be restored by gentle exercise, nourishing diet, and generous cordials. Young and delicate mothers often fall into consumptions by giving suck too long. As soon as they perceive their strength and appetite begin to fail, they ought immediately to wean the child, or provide another nurse, otherwise they cannot expect a cure.

OF THE SLOW OR NERVOUS FEVER.

NERVOUS FEVERS may be occasioned by whatever depresses the spirits, or impoverishes the blood; as grief, fear, anxiety, want of sleep, intense thought, living on poor watery diet, unripe fruits, cucumbers, melons, mushrooms, &c. They may likewise be occasioned by damp, confined, or unwholesome, air. Hence they are very common in rainy seasons, and prove most fatal to those who live in dirty, low, houses, crowded streets, hospitals, jails, or such-like places. Persons whose constitutions have been broken by excessive venery, frequent salivations, too free an use of purgative medicines, or any other excessive evacuations, are very liable to this disease.

CURE.---The patient must not be kept too low. His strength and spirits ought to be supported by nourishing diet and cordials. For this purpose his gruel, panada, or whatever food he takes, must be mixed with wine according as the symptoms may require. Pretty strong white-wine whey, or small negus, sharpened with the juice of orange or lemon, will be proper for his ordinary drink. Where a nausea, load, and sickness at stomach, prevail at the beginning of a fever, it will be necessary to give the patient a gentle vomit. Fifteen or twenty grains of ipecacuanha in fine powder will generally answer this purpose very well. This may be repeated any time before the third or fourth day, if the above symptoms continue. Vomits not only clean the stomach, but, by the general shock which they give, promote the perspiration, and have many other excellent effects in slow fevers, where there are no signs of inflammation, and nature wants rousing. Such as dare not venture upon a vomit, may clean the bowels by a small dose of Turkey rhubarb, or infusion of senna and manna. In all fevers,

fevers, the great point is to regulate the symptoms, so as to prevent them from going to either extreme. Thus, in fevers of the inflammatory kind, where the force of the circulation is too great, or the blood dense, and the fibres too rigid, bleeding and other evacuations are necessary. But, in nervous fevers, where nature flags, where the blood is vapid and poor, and the solids relaxed, the lancet must be spared, and wine, with other cordials, plentifully administered. Though bleeding is generally improper in this disease, yet blistering is highly necessary. Blisters may be applied at all times of the fever with great advantage. If the patient is delirious, he ought to be blistered on the neck or head; and it will be the safest course, while the insensibility continues, as soon as the discharge occasioned by one blister abates, to apply another to some other part of the body, and by that means keep up a continual succession of them till he be out of danger. A miliary eruption sometimes breaks out about the ninth or tenth day. As eruptions are often critical, great care should be taken not to retard Nature's operation in this particular. The eruption ought neither to be checked by bleeding nor other evacuations, nor pushed out by a hot regimen; but the patient should be supported by gentle cordials, as wine-whey, small negus, sago-gruel with a little wine in it, and such like. He ought not to be kept too warm; yet a kindly breathing sweat should by no means be checked. In desperate cases, where the hiccup and starting of the tendons have already come on, we have sometimes seen extraordinary effects from large doses of musk frequently repeated. Musk is doubtless an antispasmodic, and may be given to the quantity of a scruple three or four times a-day, or oftener if necessary. Sometimes it may be proper to add to the musk a few grains of camphire, and salt of hartshorn, as these tend to promote perspiration and the discharge of urine. Thus fifteen grains of musk, with three grains of camphire, and six grains of salt of hartshorn, may be made into a bolus with a little syrup, and given as above. If the fever should intermit, which it frequently does toward the decline, or if the patient's strength should be wasted with colliquative sweats, &c. it will be necessary to give him the Peruvian bark. Half a drachm, or a whole drachm if the stomach will bear it, of the bark in fine powder, may be given four or five times a-day, in a glass of red port or claret. Should the bark in substance not sit easy on the stomach, an ounce of it in powder may be infused in a bottle of Lisbon or Rhenish wine for two or three days; afterwards it may be strained, and a glass of it taken frequently.

OF THE MALIGNANT, PUTRID, OR SPOTTED, FEVER.

THIS fever is occasioned by foul air, from a number of people being confined in a narrow place, not properly ventilated; from putrid animal and vegetable effluvia, &c. Hence it prevails in camps, jails, hospitals, and infirmaries, especially

where such places are too much crowded, and cleanliness is neglected. Putrid, malignant, or spotted, fevers, are highly infectious; and are therefore often communicated by contagion. For which reason all persons ought to keep at a distance from those affected with such diseases, unless their attendance is absolutely necessary. Putrid fevers may be distinguished from the inflammatory by the smallness of the pulse, the great dejection of mind, the dissolved state of the blood, the petechiæ, or purple spots, and the putrid smell of the excrements. They may likewise be distinguished from the low or nervous fever by the heat and thirst being greater, the urine of a higher colour, and the loss of strength, dejection of mind, and all the other symptoms, more violent.

CURE.---The duration of putrid fevers is extremely uncertain; sometimes they terminate betwixt the seventh and fourteenth day, and at other times they are prolonged for five or six weeks. Their duration depends greatly upon the constitution of the patient, and the manner of treating the disease; in which we ought to endeavour, as much as possible, to counteract the putrid tendency of the humours; to support the patient's strength and spirits; and to assist nature in expelling the cause of the disease, by gently promoting perspiration and the other evacuations. Besides the frequent admission of fresh air, which is extremely necessary, we would recommend the use of vinegar, verjuice, juice of lemon, Seville orange, or any kind of vegetable acid that can be most readily obtained. These ought frequently to be sprinkled upon the floor, the bed, and every part of the room. The fresh skins of lemons or oranges ought likewise to be laid in different parts of the room; and they should be frequently held to the patient's nose. The use of acids in this manner would not only prove very refreshing to the patient, but would likewise tend to prevent the infection from spreading among those who attend him. Strong-scented herbs, as rue, tansy, rosemary, wormwood, &c. may likewise be laid in different parts of the house, and smelled to by those who go near the patient. If a vomit be given at the beginning of this fever, it will hardly ever fail to have a good effect; but, if the fever has gone on for some days, and the symptoms are violent, vomits are not so safe. The body however is always to be kept gently open by clysters, or mild laxative medicines. Bleeding is seldom necessary in putrid fevers. If there be signs of an inflammation, it may sometimes be permitted at the first onset; but the repetition of it generally proves hurtful. Blisters are never to be used unless in the greatest extremities. If the petechiæ or spots should suddenly disappear, the patient's pulse sink remarkably, and a delirium, with other bad symptoms, come on, blistering may be permitted. In this case the blisters are to be applied to the head, and inside of the legs or thighs. But, as they are sometimes apt to occasion a gangrene, we would rather recommend warm cataplasms or poultices of mustard and

vinegar

vinegar to be applied to the feet, having recourse to blisters only in the utmost extremities. It is common in the beginning of this fever to give the emetic tartar in small doses, repeated every second or third hour, till it shall either vomit, purge, or throw the patient into a sweat. This practice is very proper, provided it be not pushed so far as to weaken the patient. In the most dangerous species of this disease, when it is attended with purple, livid, or black, spots, the Peruvian bark should be administered; it must not only be given in large doses, but be duly persisted in. The best method of administering it is certainly in substance; but, for those who cannot take it in substance, it may be infused in wine. For preventing putrid fevers we would recommend a strict regard to cleanliness, a dry situation, sufficient exercise in the open air; wholesome food, and a moderate use of generous liquors. Infection ought above all things to be avoided. No constitution is proof against it; and when a putrid fever seizes any person in a family, the greatest attention is necessary to prevent the disease from spreading. Anyone, who is apprehensive of having caught the infection, ought immediately to take a vomit, and to work it off by drinking plentifully of camomile-tea. This may be repeated in a day or two, if the apprehensions still continue, or any unfavourable symptoms appear.

OF THE MILIARY FEVER,

SO called, from the small pustules or bladders which appear on the skin, resembling, in shape and size, the seeds of millet. The pustules are either red or white, and sometimes both are mixed together. It chiefly attacks the idle and the phlegmatic, or persons of a relaxed habit. The young and the aged are more liable to it than those in the vigour and prime of life. It is likewise more incident to women than men, especially the delicate and the indolent, who, neglecting exercise, keep continually within doors, and live upon weak watery diet. Such females are extremely liable to be seized with this disease in childbed, and often lose their lives by it. When this is a primary disease, it makes its attack, like most other eruptive fevers, with a slight shivering, which is succeeded by heat, loss of strength, a low quick pulse, difficulty of breathing, with great anxiety and oppression of the breast; and in child-bed women the milk generally goes away, and the other discharges stop.

CURE.---Sometimes the miliary fever approaches towards a putrid nature, in which case the patient's strength must be supported with generous cordials, joined with acids; and, if the degree of putrescence be great, the Peruvian bark must be administered. If the head be much affected, the body must be kept open by emollient clysters. If the food and drink be properly regulated, there will be little occasion for medicine. Where nature flags, and the eruption comes and goes, it may be necessary to keep up a stimulus, by a continual succession of small blistering
plasters;

plasters; but we would not recommend above one at a time. If however the pulse should sink remarkably, the pustules fall in, and the head be affected, it will be necessary to apply several blisters to the most sensible parts, as the inside of the legs and thighs, &c. Bleeding is seldom necessary in this disease, and sometimes it does much hurt, as it weakens the patient, and depresses his spirits. If the disease proves tedious, or the recovery slow, we would recommend the Peruvian bark, which may either be taken in substance, or infused in wine or water as the patient inclines. To avoid this disease, a pure dry air, sufficient exercise, and wholesome food, are necessary. Pregnant women should guard against costiveness, and take daily as much exercise as they can bear, avoiding all green fruits, and other unwholesome things; and, when in child-bed, they ought strictly to observe a cool regimen.

OF THE REMITTING FEVER.

THIS fever takes its name from a remission of the symptoms, which happens sometimes sooner, and sometimes later, but generally before the eighth day. The remission is commonly preceded by a gentle sweat, after which the patient seems greatly relieved, but in a few hours the fever returns. These remissions return at very irregular periods, and are sometimes of longer, sometimes of shorter, duration; the nearer however that the fever approaches to a regular intermittent, the danger is the less. They are most frequent in close calm weather, especially after rainy seasons, great inundations, or the like. No age, sex, or constitution, is exempted from the attack of this fever: but it chiefly seizes persons of a relaxed habit, who live in low dirty habitations, breathe an impure stagnated air, take little exercise, and use unwholesome diet. The first symptoms of this fever are pains and giddiness in the head, with alternate fits of heat and cold. The pulse is sometimes a little hard, but seldom full, and the blood, when let, rarely shews any signs of inflammation. In order to cure this fever, endeavours should be used to bring it to a regular intermission. This intention may be promoted by bleeding, if there be any signs of inflammation; but, when that is not the case, bleeding ought by no means to be attempted, as it will weaken the patient, and prolong the disease. A vomit however will seldom be improper, and is generally of great service. Twenty or thirty grains of ipecacuanha will answer this purpose very well; but, where it can be obtained, we would rather recommend a grain or two of emetic tartar, with five or six grains of ipecacuanha, to be made into a draught, and given for a vomit. This may be repeated once or twice at proper intervals, if the sickness or nausea continues. The body ought to be kept open either by clisters or gentle laxatives, as weak infusions of fenna and manna, small doses of the lenitive electuary, cream of tartar, tamarinds, stewed prunes, or the like; but all strong or drastic purgatives are to be avoided,

avoided. By this course the fever in a few days may generally be brought to a pretty regular or distinct intermission, in which case, the Peruvian bark may be administered, and it will seldom fail to perfect the cure.

OF THE SMALL-POX.

THE small-pox is commonly caught by infection. Since the disease was first brought from Arabia into Europe, the infection has never been wholly extinguished; nor have any proper methods been taken for that purpose; so that now it has become in a manner constitutional. Children who have over-heated themselves by running, wrestling, &c. or adults after a debauch, are most apt to be seized with the small-pox. The disease is so generally known, that a minute description of it is unnecessary. Children commonly look dull, seem listless and drowsy, for a few days before the more violent symptoms of the small-pox appear. They are likewise more inclined to drink than usual, have little appetite for solid food, complain of weariness, and, upon taking exercise, are apt to sweat. These are succeeded by slight fits of heat and cold in turns, which, as the time of the eruption approaches, become more violent, and are accompanied with pains of the head and loins, vomiting, &c. The pulse is quick, with a great heat of the skin, and restlessness. When the patient drops asleep, he wakes in a kind of horror, with a sudden start, which is a very common symptom of the approaching eruption; as are also convulsion-fits in very young children. The most favourable symptoms are a slow eruption, and an abatement of the fever as soon as the pustules appear. In a mild distinct kind of small-pox, the pustules seldom appear before the fourth day from the time of sickening, and they generally keep coming out gradually for several days after. Pustules which are distinct, with a florid red basis, and which fill with thick purulent matter, first of a whitish, and afterwards of a yellowish, colour, are the best. It is a most unfavourable symptom when petechiæ, or purple, brown, or black, spots, are interspersed among the pustules. These are signs of a putrid dissolution of the blood, and shew the danger to be very great. Bloody stools, or urine, with a swelled belly, are bad symptoms; as is also a continual stranguary. Pale urine and a violent throbbing of the arteries of the neck are signs of an approaching delirium, or of convulsion-fits. When the face does not swell, or falls before the pock comes to maturity, it is very unfavourable. If the face begins to fall about the eleventh or twelfth day, and at the same time the hands and feet begin to swell, the patient generally does well; but, when these do not succeed to each other, there is a reason to apprehend danger.

CURE.---All that is necessary, during the eruptive fever, is to keep the patient cool and easy, allowing him to drink freely of some weak diluting liquors; as

baum-tea, barley-water, clear whey, gruels, &c. Much mischief is done at this period by confining the patient to his bed, and plying him with warm cordials or sudorific medicines. Every thing that heats and inflames the blood increases the fever, and pushes out the pustules prematurely. This has numberless ill effects. It not only increases the number of pustules, but likewise tends to make them run into one another; and, when they have been pushed out with too great violence, they generally fall in before they come to maturity. The food ought to be very light, and of a cooling nature, as panada, or bread boiled with equal quantities of milk and water, good apples roasted or boiled with milk, and sweetened with a little sugar or such like. The most dangerous period of this disease is what we call the secondary fever. This generally comes on when the pock begins to blacken or turn on the face, and most of those who die of the small-pox are carried off by this fever. Nature generally attempts, at the turn of the small-pox, to relieve the patient by loose stools. Her endeavours this way are by no means to be counteracted, but promoted; and the patient at the same time supported by food and drink of a nourishing and cordial nature. If, at the approach of the secondary fever, the pulse be very quick, hard, and strong, the heat intense, and the breathing laborious, with other symptoms of an inflammation of the breast, the patient must immediately be bled. The quantity of blood to be let must be regulated by the patient's strength, age, and urgency of the symptoms. But, in the secondary fever, if the patient be faintish, the pustules become suddenly pale, and if there be great coldness of the extremities, blisters must be applied, and the patient must be supported with generous cordials. Wine and even spirits have sometimes been given in such cases with amazing success. It is generally necessary, after the small-pox is gone off, to purge the patient. If however the body has been open through the whole course of the disease, or if butter-milk and other things of an opening nature have been drunk freely after the height of the small-pox, purging becomes less necessary; but it ought never wholly to be neglected. For very young children, an infusion of fenna and prunes, with a little rhubarb, may be sweetened with coarse sugar, and given in small quantities till it operates. Those who are farther advanced must take medicines of a sharper nature. For example, a child of five or six years of age may take eight or ten grains of fine rhubarb in powder over night, and the same quantity of jalap in powder next morning. This may be wrought off with fresh broth or water gruel, and may be repeated three or four times, five or six days intervening betwixt each dose. For children further advanced, and adults, the dose must be increased in proportion to the age and constitution. When a cough, a difficulty of breathing, or other symptoms of a consumption, succeed to the small-pox, the patient must be sent to a place where the air

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is good, and put upon a course of asses milk, with such other treatment as hath already been directed in consumptions.

OF INOCULATION.

THIS salutary invention, which is the only effectual means of stopping the ravages of this disease, has been known in Europe above half a century; yet, like most other useful discoveries, it has, till of late, made but slow progress. No discovery can be of general utility, while the practice of it is kept in the hands of a few. The fears, the jealousies, the prejudices, and the opposite interests, of the faculty, are, and ever will be, the most effectual obstacles to the progress of any salutary discovery. Hence it is that the practice of inoculation never became, in any measure, general, even in England, till taken up by men not bred to physic. These have not only rendered the practice more extensive, but likewise more safe, and, by acting under less restraint than the regular practitioners, have taught them that the patient's greatest danger arose, not from the *want* of medical care, but from the *excess* of it. The present method of inoculating in Britain, is to make two or three slanting incisions in the arm, so superficial as not to pierce quite through the skin, with a lancet wet with fresh matter taken from a ripe pustule; afterwards the wounds are closed up, and left without any dressing. Some make use of a lancet covered with the dry matter; but this is less certain, and ought never to be used unless where fresh matter cannot be obtained: when this is the case, the matter ought to be moistened by holding the lancet for some time in the steam of warm water. We do not find that inoculation is at all considered as a medical operation in foreign countries. In Turkey, whence we learned it, it is performed by the women, and in the East Indies by the brachmins or priests. In this country, the custom, though still in its infancy, has been practised by numbers of the common people with astonishing success; and, as the small-pox is now become an epidemical disease in most parts of the known world, there seems no other choice left, but to render the malady as mild as possible. It is a matter of small consequence, whether a disease be entirely extirpated, or rendered so mild as neither to destroy life nor hurt the constitution; and that this may be done by inoculation, does not now admit of a doubt. The numbers who die under inoculation hardly deserve to be named. In the natural way, one in four or five generally dies; but by inoculation not one of a thousand. Nay, some can boast of having inoculated ten thousand without the loss of a single patient. The most proper age for inoculating children is betwixt three and five. Those who have constitutional diseases may nevertheless be inoculated; it will often mend the habit of body; but ought to be performed at a time when they are most healthy. Accidental diseases should always be removed before inoculation. It is

generally thought necessary to regulate the diet for some time before the disease be communicated. In children, however, great alteration in diet is seldom necessary, their food being commonly of the most simple and wholesome kind, as milk, water-gruel, weak broths, bread, light pudding, mild roots, and white meats. We would recommend no other medicinal preparation than two or three mild purges, which ought to be suited to the age and strength of the patient. The success of inoculations does not depend on the preparation of their patients, but on their management of them while under the disease. Their constant care should be to keep them cool, and their bodies gently open, by which means the fever is kept low, and the eruption greatly lessened. The danger is seldom great when the pustules are few; and their number is generally in proportion to the fever which precedes and attends the eruption. Hence the chief secret of inoculation consists in regulating the eruptive fever, which generally may be kept sufficiently low by the methods mentioned above. The regimen during the disease is in all respects the same as under the natural small-pox. The patient must be kept cool, his diet should be light, and his drink weak and diluting, &c. Should any bad symptom appear, which is seldom the case, they must be treated in the same way as directed in the natural small-pox. Purging is not less necessary after the small-pox by inoculation than in the natural way, and ought by no means to be neglected.

OF THE MEASLES.

THIS disease, like the small-pox, proceeds from infection, and is more or less dangerous according to the constitution of the patient, the season of the year, the climate, &c. It is usually preceded by a short cough, a heaviness of the head and eyes, drowsiness, and a running at the nose. There is an inflammation and heat in the eyes, with a defluxion of sharp tears, vomiting, and great acuteness of sensation, so that the patient cannot bear the light without pain. About the fourth day, small spots, resembling flea-bites, appear, first upon the face, then upon the breast, and afterwards on the extremities: these may be distinguished from the small-pox by their scarcely rising above the skin. The fever, cough, and difficulty of breathing, instead of being removed by the eruption, as in the small-pox, are rather increased; but the vomiting generally ceases. About the sixth or seventh day from the time of sickening, the measles begin to turn pale on the face, and afterwards upon the body; so that by the ninth day they entirely disappear. Such as die of the measles generally expire about the ninth day from the invasion, and are commonly carried off by inflammation of the lungs. The most favourable symptoms are, a moderate looseness, a moist skin, and a plentiful discharge of urine. When the eruption suddenly falls in, and the patient is seized with a delirium, he is in the greatest danger.

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If the measles turn too soon of a pale colour, it is an unfavourable symptom, as are also great weakness, vomiting, restlessness, and difficulty of swallowing. Purple or black spots appearing among the measles are very unfavourable. When a continual cough, with hoarseness, succeeds the disease, there is reason to suspect an approaching consumption of the lungs.

CURE.---Our business in this disease is to assist nature by proper cordials in throwing out the morbid matter, if her efforts be too languid; but when they are too violent they must be restrained by evacuations, and cool diluting liquors, &c. We ought likewise to endeavour to appease the most urgent symptoms, as the cough, restlessness, and difficulty of breathing. A cool regimen is necessary here as well as in the small-pox. The food too must be light, and the drink diluting. The most suitable liquors are decoctions of liquorice with marsh-mallow roots and farfaparilla, infusions of linseed, or of the flowers of elder, balm-tea, clarified whey, barley-water, and such like. Bleeding is commonly necessary, particularly when the fever runs high, with difficulty of breathing, and great oppression of the breast. But, if the disease be of a mild kind, bleeding may be omitted. If at the turn of the disease the fever assumes new vigour, and there appears great danger of suffocation, bleeding must be repeated according to the patient's strength, and blisters must be applied, with a view to prevent the load from being thrown on the lungs, where if an inflammation should fix itself, the patient's life will be in imminent danger. In case the measles should suddenly disappear, the patient must be supported with wine and cordials. Blisters must be applied to the legs and arms, and the body rubbed all over with warm flannels. Should a cough, with difficulty of breathing, and other symptoms of a consumption, remain after the measles, small quantities of blood may be frequently let at proper intervals, as the patient's strength and constitution will permit. He ought likewise to drink asses milk, to remove to a free air, and to ride daily on horseback.

OF THE SCARLET FEVER:

THE scarlet fever is so called from the colour of the patient's skin, which appears as if it were tinged with red wine. It begins, like other fevers, with coldness and shivering, without any violent sickness. Afterwards the skin is covered with red spots, which are broader, more florid, and less uniform, than the measles. They continue two or three days, and then disappear; after which the cuticle, or scarf-skin, falls off.

CURE.---There is seldom any occasion for medicine in this disease, unless it is attended with putrid or malignant symptoms, in which case it is always dangerous; the patient is then not only affected with coldness and shivering, but with languor, sickness,

sickness, and great oppression; to these succeed excessive heat, nausea, and vomiting, with a soreness of the throat; the pulse is extremely quick, but small and depressed: the breathing frequent and laborious; the skin hot, but not quite dry; the tongue moist, and covered with a whitish mucus; the tonsils inflamed and ulcerated. When the eruption appears, it brings no relief: on the contrary, the symptoms generally grow worse, and fresh ones come on, as purging, delirium, &c. Should this disease be mistaken for a simple inflammation, and treated with repeated bleedings, purging and cooling medicines, as is sometimes the case, it generally proves fatal. The only medicines that can be depended on are cordials and antiseptics, as the Peruvian bark, wine, snake-root, and the like. The treatment must be in general similar to that of the putrid fever, or of the malignant ulcerous sore throat.

OF THE BILIOUS FEVER.

A CONTINUAL remitting or intermitting fever, accompanied with a copious evacuation of bile, either by vomit or stool, is denominated *bilious*. It generally makes its appearance about the end of summer, and ceases towards the approach of winter. It is most fatal in warm countries, especially where the soil is marshy, and when great rains are succeeded by sultry heats. Those who work without doors, and are exposed to the night air, are most liable to this kind of fever.

CURE.---If there are symptoms of inflammation, it will be necessary to bleed, and to put the patient upon cool diluting regimen, recommended in the inflammatory fever. Saline draughts may likewise be frequently administered, and the patient's body kept open by clysters or mild purgatives. But, if the fever should remit or intermit, bleeding will seldom be necessary. In this case a vomit may be administered, and, if the body be bound, a gentle purge; after which the Peruvian bark will generally complete the cure.

OF THE ERYSIPELAS, OR ST. ANTHONY'S FIRE.

THE erysipelas may be occasioned by violent passions or affections of the mind; as, fear, anger, &c. When the body has been heated to a great degree, and is immediately exposed to the cold air, so that the perspiration is suddenly checked, an erysipelas will often ensue. It may also be occasioned by drinking to excess, by continuing too long in a warm bath, or by any thing that over-heats the blood. If any of the natural evacuations be obstructed, or in too small quantity, it may cause an erysipelas. The same effect will follow from the stoppage of artificial evacuations; as issues, setons, or the like. The disorder comes on with shivering, thirst, loss of strength, pain in the head and back, heat, restlessness, and a quick pulse; to which

which may be added vomiting, and sometimes a delirium. On the second, third, or fourth, day, the part swells, becomes red, and small pustules appear: at which time the fever generally abates. When the erysipelas is large, deep, and affects a very sensible part of the body, the danger is great. If the red colour changes into a livid or black, it will end in a mortification. Sometimes the inflammation cannot be discussed, but comes to a suppuration; in which case fistulas, a gangrene, or mortification, often ensue. Such as die of this disease are commonly carried off by the fever, which is attended with difficulty of breathing, and sometimes with a delirium and great drowsiness. They generally die about the seventh or eighth day.

CURE.---In this complaint much mischief is often done by medicines, especially by external applications; whereas the principal object should be to promote perspiration, which has a great tendency to carry off the disease. It is common to bleed in the erysipelas; but this likewise requires caution. If however the fever be high, the pulse hard and strong, and the patient vigorous, it will be proper to bleed; but the quantity must be regulated by these circumstances, and the operation repeated as the symptoms may require. If the patient has been accustomed to strong liquors, and the disease attacks his head, bleeding is absolutely necessary. Bathing the feet and legs frequently in lukewarm water, when the disease attacks the face or brain, has an excellent effect. It tends to make a derivation from the head, and seldom fails to relieve the patient. When bathing proves ineffectual, poultices, or sharp sinapisms, may be applied to the soles of the feet for the same purpose. In cases where bleeding is requisite, it is likewise necessary to keep the body open. This may be effected by emollient clysters, or small doses of nitre and rhubarb. Some indeed recommend very large doses of nitre in the erysipelas; but nitre seldom sits easy on the stomach when taken in large doses. It is however one of the best medicines when the fever and inflammation run high. Half a drachm of it, with four or five grains of rhubarb, may be taken in the patient's ordinary drink, four times a day. When the erysipelas seizes the head, so as to occasion a delirium or stupor, blisters must be applied to the neck, or behind the ears, and sharp cataplasms laid to the soles of the feet. In what is commonly called the *scorbutic erysipelas*, which continues for a considerable time, it will only be necessary to give gentle laxatives, and such things as purify the blood, and promote the perspiration. And, after the inflammation has been checked by opening medicines, the decoction of woods and bitter herbs may be drunk, as recommended for this disease in the Herbal.

OF THE INFLAMMATION OF THE BRAIN.

THE symptoms which usually precede a true inflammation of the brain, are pain of the head, redness of the eyes, a violent flushing of the face, disturbed sleep, or a total

want of it, great driness of the skin, costiveness, a retention of urine, a small dropping of blood from the nose, ringing of the ears, and extreme sensibility of the nervous system. When the brain itself is inflamed, the pulse is always soft and low; but, when the inflammation only affects the integuments of the brain, viz. the *dura* and *pia mater*, it is hard.

CURE.---As this disease often proves fatal in a few days, it requires the most speedy applications. When it is prolonged, or improperly treated, it sometimes ends in madness, or a kind of stupidity which continues for life. Two things are chiefly to be attended to, in the cure, viz. to lessen the quantity of blood in the brain, and to retard the circulation towards the head. Nothing more certainly relieves the patient than a free discharge of blood from the nose. When this comes of its own accord, it is by no means to be stopped, but rather promoted, by applying cloths dipped in warm water to the part. When bleeding at the nose does not happen spontaneously, it may be provoked by putting a straw, or any other sharp body, up the nostril. Bleeding in the temporal arteries greatly relieves the head: but, as this operation cannot always be performed, we would recommend in its stead bleeding in the jugular veins. When the patient's pulse and spirits are so low, that he cannot bear bleeding with the lancet, leeches may be applied to the temples. These not only draw off the blood more gradually, but, by being applied nearer to the part affected, generally give more immediate relief. If the inflammation of the brain be occasioned by the stoppage of evacuations either natural or artificial, as the menses, issues, setons, or such like, all means must be used to restore them as soon as possible, or to substitute others in their stead. The patient's body must be kept open by stimulating clysters or smart purges; and small quantities of nitre ought frequently to be mixed with his drink. Two or three drachms, or more, if the case be dangerous, may be used in the space of twenty-four hours. If the disease proves obstinate, and does not yield to the medicines, it will be necessary to apply a blistering-plaster to the whole head.

OF THE INFLAMMATION OF THE EYES.

THIS disorder is attended with acute pain, heat, redness, and swelling.---The patient is not able to bear the light, and sometimes he feels a pricking pain, as if his eyes were pierced with a thorn. The pulse is generally quick and hard, with some degree of fever. When the disease is violent, the neighbouring parts swell, and there is a throbbing or pulsation in the temporal arteries, &c. A slight inflammation of the eyes, especially from an external cause, is easily cured; but, when the disease is violent, and continues long, it often leaves specks upon the eyes, or dimness of sight, and sometimes total blindness.

CURE.

CURE---The patient must abstain from every thing of a heating nature. His food should consist chiefly of mild vegetables, weak broths, and gruels. His drink may be barley-water, balm-tea, common whey, and such like. Bleeding, in a violent inflammation of the eyes, is always necessary. This should be performed as near the part affected as possible. An adult may lose ten or twelve ounces of blood from the jugular vein, and the operation may be repeated according to the urgency of the symptoms. If it should not be convenient to bleed in the neck, the same quantity may be let from the arm, or any other part of the body. Leeches are often applied to the temples, or under the eyes, with good effect. The wounds must be suffered to bleed for some hours, and, if the bleeding stop soon, it may be promoted by the application of cloths dipt in warm water. In obstinate cases, it will be necessary to repeat this operation several times. Opening and diluting medicines are by no means to be neglected; but, if the inflammation does not yield to these evacuations, blisters must be applied to the temples, behind the ears, or upon the neck, and kept open for some time. I have seldom known these, if long enough kept open, fail to remove the most obstinate inflammation of the eyes; but, for this purpose, it is often necessary to continue the discharge for several weeks. Those who are liable to frequent returns of this disease, ought constantly to have an issue in one or both arms, or a seton cut betwixt the shoulders. Bleeding or purging in the spring and autumn will be very beneficial to such persons.

OF THE QUINSEY, OR INFLAMMATORY SORE THROAT.

THIS disease is frequently attended with great danger. When the inflammation comes on, the parts appear red and swelled; the patient complains of pain in swallowing; his pulse is quick and hard, with other symptoms of a fever. If blood be let, it is generally covered with a tough coat of a whitish colour, and the patient spits a tough phlegm. As the swelling and inflammation encrease, the breathing and swallowing become more difficult; the pain affects the ears; the eyes generally appear red; and the face swells. When the breathing is laborious, with straightness of the breast, and anxiety, the danger is great. Though the pain in swallowing be very great, yet, while the patient breathes easy, there is not so much danger: An external swelling is no unfavourable symptom; but, if it suddenly falls, and the disease affects the breast, the danger is very great. When a quinsy is the consequence of some other disease, which has already weakened the patient, his situation is dangerous. A frothing at the mouth, and a swelled tongue, a pale ghastly countenance, and coldness of the extremities, are fatal symptoms.

CURE---It is peculiarly necessary that the neck be kept warm; for which purpose several folds of soft flannel may be wrapt round it. The jelly of black currants is a medicine very much in esteem for complaints of the throat; and indeed it

is of some use. It should be almost constantly kept in the mouth, and swallowed down leisurely. It may likewise be mixed in the patient's drink, or taken any other way. When it cannot be obtained, the jelly of red currants, or of mulberries, may be used in its stead. Gargles are also very beneficial: they may be made of sage-tea, with a little vinegar and honey; and may be used three or four times a-day; and, if the patient be troubled with tough viscid phlegm, the gargle may be rendered more sharp and cleansing by adding to it a teaspoon-full of spirit of sal ammoniac. There is no disease wherein the benefit of bathing the feet and legs in lukewarm water is more apparent: that practice ought therefore never to be neglected. If the inflammation be violent, it will be proper, as soon as the symptoms appear, to bleed in the arm, or rather in the jugular vein, and to repeat the operation if circumstances require. The body should likewise be kept gently open. This may be done by giving the patient for his ordinary drink a decoction of figs and tamarinds, or small doses of rhubarb and nitre. Good effects are often produced from a bit of sal prunel, or purified nitre, held in the mouth, and swallowed down as it melts. This promotes the discharge of saliva, by which means it answers the end of a gargle, while at the same time it abates the fever, by promoting the discharge of urine, &c. Blistering upon the neck or behind the ears, in violent inflammations of the throat, is very beneficial; and in bad cases it will be necessary to lay a blistering-plaster quite across the throat, so as to reach from ear to ear. After the plasters are taken off, the parts ought to be kept running by the application of issue ointment, till the inflammation is gone; otherwise, upon their drying up, the patient will be in danger of a relapse. When a difficulty of swallowing is not attended with an acute pain or inflammation, it only requires that the part be kept warm, and the throat frequently gargled with something that may gently stimulate the glands, as a decoction of figs with vinegar and honey; to which may be added a little mustard, or a small quantity of spirits. But this gargle is never to be used where there are signs of an inflammation. Those who are subject to inflammations of the throat, in order to avoid that disease, ought to live temperate. Such as do not chuse to observe this rule must have frequent recourse to purging and other evacuations, to discharge the superfluous humours. They ought likewise to beware of catching cold, and should abstain from aliment and medicines of an astringent or stimulating nature.

OF THE MALIGNANT OR PUTRID ULCEROUS SORE THROAT.

THIS is evidently a contagious distemper, and is generally communicated by infection. Whole families, and even entire villages, often receive the infection from one person. Whatever tends to produce putrid or malignant fevers may likewise
occasion

occasion the putrid ulcerous sore throat, as unwholesome air, damaged provisions, neglect of cleanliness, &c. It begins with alternate fits of shivering and heat. The pulse is quick, but low and unequal, and generally continues so through the whole course of the disease. The tongue is white, and generally moist, which distinguishes this from an inflammatory disease. Upon looking into the throat, it appears swelled, and of a florid red colour. Pale or ash coloured spots, however, are here and there interspersed, and sometimes one broad patch or spot, of an irregular figure, and pale white colour, surrounded with florid red, only appears. These whitish spots or sloughs cover so many ulcers. The putrid ulcerous sore throat may be distinguished from the inflammatory by the vomiting and looseness with which it is generally ushered in; the foul ulcers in the throat covered with a white or livid coat; and by the excessive weakness of the patient; with other symptoms of a putrid fever.

CURE.---The treatment in this kind of sore throat is entirely different from that which is proper in the inflammatory. All evacuations, as bleeding, purging, &c. which weaken the patient, must be avoided. Cooling medicines, as nitre and cream of tartar, are likewise hurtful. Strengthening cordials alone can be used with safety; and these ought never to be neglected. If, at the beginning, there is a great nausea, or inclination to vomit, the patient must drink an infusion of green tea, camomile flowers, or *carduus benedictus*, in order to cleanse the stomach. If these are not sufficient, he may take a few grains of the powder of ipecacuanha, or any other gentle vomit. If the disease is mild, the throat may be gargled with an infusion of sage and rose leaves, to a gill of which may be added a spoonful or two of honey, and as much vinegar as will make it agreeably acid; but, when the symptoms are urgent, it will be of a great benefit if the patient frequently receives into his mouth, through an inverted funnel, the streams of warm vinegar, myrrh, and honey. But, when the putrid symptoms run high, and the disease is attended with danger, the only medicine that can be depended upon is the Peruvian bark. It may be taken in substance, if the patient's stomach will bear it. If not, an ounce of bark grossly powdered, with two drachms of Virginian snake-root, may be boiled in a pint and a half of water to half a pint; to which a tea-spoonful of the elixir of vitriol may be added, and an ordinary tea-cupful of it taken every three or four hours. Blisters are very beneficial in this disease, especially when the patient's pulse and spirits are low. They may be applied to the throat, behind the ears, or upon the back part of the neck. If a discharge of blood from the nose happens, the streams of warm vinegar may be received up the nostrils frequently; and the drink must be sharpened with spirits of vitriol, or tincture of roses. In case of a strangury, the belly must be fomented with warm water, and emollient clysters given three or four times a-day. After the violence of the disease is over, the body should still be kept open with mild purgatives; as manna, senna, rhubarb, or the like.

OF COLDS AND COUGHS.

COLDS are the effect of an obstructed perspiration; and almost every cold is a kind of fever, which only differs in degree from some of those that have already been treated of. No age, sex, or constitution, is exempted from this disease; neither is it in the power of any medicine or regimen to prevent it. The inhabitants of every climate are liable to catch cold, nor can even the greatest circumspection defend them at all times from its attacks. Indeed, if the human body could be kept constantly in an uniform degree of warmth, such a thing as catching cold would be impossible: but, as that cannot be effected by any means, the perspiration must be liable to many changes. When oppression of the breast, a stuffing of the nose, unusual weariness, pain of the head, &c. give ground to believe that the perspiration is obstructed, or, in other words, that the person has caught cold, he ought immediately to lessen his diet, at least the usual quantity of his solid food, and to abstain from all strong liquors. Would people sacrifice a little time to ease and warmth, and practise a moderate degree of abstinence when the first symptoms of a cold appear, we have reason to believe, that most of the bad effects which flow from an obstructed perspiration might be prevented. But, after the disease has gathered strength by delay, all attempts to remove it often prove vain. A pleurisy, a peripneumony, or a fatal consumption of the lungs, are often the effects of common colds; notwithstanding people affect to treat them with so much indifference and neglect, merely because they are only colds. Hence it is, that colds destroy such numbers of mankind. Like an enemy despised, they gather strength from delay, till, at length, they become invincible. It is certain, however, that colds may be too much indulged. When a person, for every slight cold, shuts himself up in a warm room, swallows medicine, and drinks great quantities of warm liquor, it may occasion such a general relaxation of the solids as will not be easily removed. Bathing the feet in warm water, lying in bed, and drinking warm water-gruel, or other weak liquors, will sooner take off a spasm, and restore the perspiration, than all the hot sudorific medicines in the world. This is all that is necessary for removing a common cold; and, if this course be taken at the beginning, it will seldom fail. When the symptoms do not yield to abstinence, warmth, and diluting liquors, there is reason to fear the approach of some other disease, as an inflammation of the breast, an ardent fever, or the like, and the patient should then be treated accordingly. The chief secret of preventing colds lies in avoiding as far as possible, all extremes either of heat or cold, and in taking care, when the body is heated, to let it cool gradually.

OF A COMMON COUGH.

A COUGH is generally the effect of a cold, which has either been improperly treated, or entirely neglected. When it proves obstinate, there is always reason to fear the consequences, as this shews a weak state of the lungs, and is often the forerunner of a consumption. If the cough be violent, and the patient young and strong, with a hard quick pulse, bleeding will be proper; but, in weak and relaxed habits, bleeding rather prolongs the disease. When the patient spits freely, bleeding is unnecessary, and sometimes hurtful, as it tends to lessen that discharge. When a cough is occasioned by acrid humours tickling the throat and fauces, the patient should keep some soft pectoral lozenges almost constantly in his mouth; as the Pontefract liquorice cakes, barley-sugar, the common balsamic lozenges, Spanish juice, &c. These blunt the acrimony of the humours, and, by taking off their stimulating quality, help to appease the cough. In obstinate coughs, proceeding from a flux of humours upon the lungs, it will often be necessary, besides expectorating medicines, to have recourse to issues, setons, or some other drain. In this case I have often observed the most happy effects from a Burgundy-pitch plaster applied between the shoulders. About the bulk of a nutmeg of Burgundy-pitch may be spread thin upon a piece of soft leather, about the size of the hand, and laid between the shoulder-blades. It may be taken off and wiped every three or four days, and ought to be renewed once a fortnight or three weeks. This is, indeed, a cheap and simple medicine, and consequently apt to be despised; but we will venture to affirm, that the whole *materia medica* does not afford an application more efficacious in almost every kind of cough. It has not, indeed, always an immediate effect; but, if kept on for some time, it will succeed where most other medicines fail. But coughs proceed from many other causes besides defluxions upon the lungs. In these cases the cure is not to be attempted by pectoral medicines. Thus, in a cough proceeding from a foulness and debility of the stomach, syrups, oils, mucilages, and all kinds of balsamic medicines, do hurt. The stomach cough may be known from one that is owing to a fault in the lungs by this, that in the latter the patient coughs whenever he inspires, or draws in his breath fully; but in the former that does not happen.

CURE.---The cure of this cough depends chiefly upon cleansing and strengthening the stomach; for which purpose gentle vomits and bitter purgatives are most proper. Thus, after a vomit or two, the sacred tincture, as it is called, may be taken for a considerable time in the dose of one or two table-spoonfuls twice a-day, or as often as it is found necessary, to keep the body gently open. People may make this tincture themselves, by infusing an ounce of *hiera picra* in an English pint of white-wine, letting it stand a few days, and then straining it. In

coughs which proceed from a debility of the stomach, the Peruvian bark is likewise of considerable service. It may either be chewed, taken in powder, or made into a tincture along with other stomachic bitters. A nervous cough can only be removed by change of air and proper exercise. Immersing the feet and hands in warm water will often appease the violence of a nervous cough. When a cough is only the symptom of some other malady, it is in vain to attempt to remove it without first curing the disease from which it proceeds. Thus, when a cough is occasioned by teething, keeping the body open, scarifying the gums, or whatever facilitates the cutting of the teeth, likewise appeases the cough. In like manner, when worms occasion a cough, such medicines as remove these vermin will generally cure the cough; as bitter purgatives, oily clysters, and such like. Women, during the last months of pregnancy, are often greatly afflicted with a cough, which is generally relieved by bleeding and keeping the body open. They ought to avoid all flatulent food, and to wear a loose easy dress.

OF THE WHOOPING OR CHIN COUGH.

THIS cough seldom affects adults, but proves often fatal to children. Whatever hurts the digestion, obstructs the perspiration, or relaxes the solids, disposes to this disease: consequently its cure must depend upon cleansing and strengthening the stomach, bracing the solids, and, at the same time, promoting perspiration and the different secretions.

CURE.---One of the most effectual remedies in the chin-cough is change of air. This often removes the malady, even when the change seems to be from a purer to a less wholesome air. This may in some measure depend on the patient's being removed from the place where the infection prevails. Most of the diseases of children are infectious; nor is it at all uncommon to find the chin-cough prevailing in one town or village, when another, at a very small distance, is quite free from it. But, whatever be the cause, we are sure of the fact. No time ought therefore to be lost in removing the patient at some distance from the place where he caught the disease, and, if possible, into a more pure and warm air. When the disease proves violent, and the patient is in danger of being suffocated by the cough, he ought to be bled, especially if there be a fever with a hard full pulse. But, as the chief intention of bleeding is to prevent an inflammation of the lungs, and to render it more safe to give vomits, it will seldom be necessary to repeat the operation; yet, if there be symptoms of an inflammation of the lungs, a second, or even a third, bleeding may be requisite. Vomits not only cleanse the stomach, which in this disease is generally loaded with viscid phlegm, but they likewise promote the perspiration and other secretions; and ought therefore to be repeated according to the

the obstinacy of the disease. They should not be strong; gentle vomits frequently repeated are less dangerous, and more beneficial, than strong ones. Many people believe that oily, pectoral, and balsamic, medicines possess wonderful virtues for the cure of the chin-cough, and accordingly exhibit them plentifully to patients of every age and constitution, without considering that every thing of this nature must load the stomach, hurt the digestion, and of course aggravate the disorder. The millepedes, or woodlice, are greatly recommended for the cure of a chin-cough. Those, who chuse to make use of these insects, may infuse two ounces of them bruised in an English pint of small white-wine for one night. Afterwards the liquor may be strained through a cloth, and a table spoonful of it given to the patient three or four times a-day. Opiates are sometimes necessary to allay the violence of the cough. For this purpose a little of the syrup of poppies, or five, six, or seven, drops of laudanum, according to the age of the patient, may be taken in a cup of hyssop or penny-royal-tea, and repeated occasionally. The garlic ointment is a well-known remedy in North-Britain for the chin-cough. It is made by beating in a mortar garlic with an equal quantity of hogs lard. With this the soles of the feet may be rubbed twice or thrice a-day; but the best method is to spread it upon a rag, and apply it in the form of a plaster. It should be renewed every night and morning at least, as the garlic soon loses its virtue. This is an exceeding good medicine both in the chin-cough and in most other coughs of an obstinate nature. It ought not, however, to be used when the patient is very hot or feverish, lest it should increase these symptoms.

INFLAMMATION OF THE STOMACH.

AN inflammation of the stomach may proceed from any of the causes which produce an inflammatory fever; as cold liquor drunk while the body is warm, obstructed perspiration, or the sudden striking in of any eruption. It is attended with a fixed pain and burning heat in the stomach; great restlessness and anxiety; a small, quick, and hard, pulse; vomiting, or, at least, a nausea and sickness; excessive thirst; coldness of the extremities; difficulty of breathing; cold clammy sweats; and sometimes convulsions and fainting fits. The stomach is swelled, and often feels hard to the touch. One of the most certain signs of this disease is the sense of pain, which the patient feels upon taking any kind of food or drink, especially if it be either too hot or too cold.

CURE.---All acrimonious, heating, and irritating, food and drink are carefully to be avoided. The weakness of the patient may deceive the by-standers, and induce them to give him wines, spirits, or other cordials; but these never fail to increase the disease, and often occasion sudden death. The inclination to vomit

may likewise impose on the attendants, and make them think a vomit necessary; but that too is almost certain death. Bleeding is absolutely necessary, and is almost the only thing that can be depended on. When the disease proves obstinate, it will often be proper to repeat this operation several times, nor must the low state of the pulse deter us from doing so. The pulse indeed generally rises upon bleeding, and, as long as that is the case, the operation is safe. Frequent fomentations with lukewarm water, or a decoction of emollient vegetables, as recommended in the Herbal, are likewise beneficial. Flannel cloths dipped in these must be applied to the region of the stomach, and removed as they grow cool. In this, and all other inflammations of the bowels, an epispastic, or blistering-plaister, applied over the part affected, is one of the best remedies known. The only internal medicines which can with safety be recommended are mild clysters. These may be made of warm water, or thin water-gruel; and, if the patient is costive, a little sweet oil, honey, or manna, may be added. Clysters answer the purpose of an internal fomentation, while they keep the body open, and at the same time nourish the patient, who is often, in this disease, unable to retain any food upon his stomach. For these reasons they must not be neglected, as the patient's life may depend on them.

INFLAMMATION OF THE INTESTINES.

THIS is one of the most painful and dangerous diseases that mankind is liable to. It generally proceeds from the same causes as the inflammation of the stomach; to which may be added costiveness, worms, eating unripe fruits, or great quantities of nuts, drinking hard windy malt liquors, as stale bottled beer or ale, four wine, cyder, &c. The inflammation of the intestines is denominated iliac passion, enteritis, &c. according to the name of the parts affected. The treatment however is nearly the same, whatever part of the intestinal canal be the seat of the disease. The symptoms are nearly the same as in the foregoing disease; only the pain, if possible, is more acute, and is situated lower. The vomiting is likewise more violent, and sometimes even the excrements, together with the clysters and suppositories, are discharged by the mouth. While the pain shifts, and the vomiting only returns at certain intervals, and while the clysters pass downwards, there is ground to hope; but, when the clysters and fæces are vomited, and the patient is exceeding weak, with a low fluttering pulse, a pale countenance, and a disagreeable or stinking breath, there is great reason to fear that the consequences will prove fatal. Clammy sweats, black foetid stools, with a small intermitting pulse, and a total cessation of pain, are signs of a mortification already begun, and of approaching death.

CURE.---Bleeding, in this as well as in the inflammation of the stomach, is of the greatest importance. It should be performed as soon as the symptoms appear,
and

and must be repeated according to the strength of the patient and the violence of the disease. A blister is likewise to be applied immediately over the part where the most violent pain is. This not only relieves the pain of the bowels, but even clysters and purgative medicines, which before had no effect, will operate when the blister begins to rise. The patient's feet and legs should frequently be bathed in warm water, and cloths dipped in it applied to his belly. Bladders filled with warm water may likewise be applied to the region of the navel, and warm bricks, or bottles filled with warm water, to the soles of the feet. If the disease does not yield to clysters and fomentations, recourse must be had to pretty strong purgatives; but, as these, by irritating the bowels, often increase their contraction, and by that means frustrate their own intention, it will be necessary to join them with opiates, which, by allaying the pain, and relaxing the spasmodic contractions of the guts, greatly assist the operation of purgatives in this case. What answers the purpose of opening the body very well, is a solution of the bitter purging salts. Two ounces of these may be dissolved in an English pint of warm water, or thin gruel, and a tea-cupful of it taken every half-hour till it operates. At the same time fifteen, twenty, or twenty-five, drops of laudanum may be given in a glass of pepper-mint or simple cinnamon-water, to appease the irritation, and prevent the vomiting, &c. But it often happens that no liquid whatever will stay on the stomach. In this case, the patient must take purging pills. I have generally found the following answer very well: Take jalap in powder, and vitriolated tartar, of each half a drachm; opium one grain; Castile soap as much as will make the mass fit for pills. These must be taken at one dose; and, if they do not operate in a few hours, the dose may be repeated. If a stool cannot be procured by any of the above means, it will be necessary to immerse the patient in warm water up to the breast. This often succeeds when other means have been tried in vain. The patient must continue in the water as long as he can easily bear it without fainting; and, if one immersion has not the desired effect, it may be repeated as soon as the patient's strength and spirits are recruited. It is more safe for him to go frequently into the bath than to continue too long at a time; and it is often necessary to repeat it several times before it has the desired effect. In desperate cases it is common to give quicksilver. This may be given to the quantity of several ounces, or even a pound, but should not exceed that. When there is reason to suspect a mortification of the guts, this medicine ought not to be tried. In that case it cannot cure the patient, and will only hasten his death. But, when the obstruction is occasioned by any cause that can be removed by force, quicksilver is not only a proper medicine, but the best that can be administered, as it is the fittest body we know for making its way through the intestinal canal.

OF THE CHOLIC.

THE cholic has a great resemblance to the two preceding diseases, both in its symptoms and method of cure. It is generally attended with costiveness and acute pain of the bowels; and requires diluting diet, evacuations, fomentations, &c. Cholics are variously denominated, according to their causes, as the flatulent, the bilious, the hysseric, the nervous, &c.

CURE.---When the disease proceeds from windy liquor, green fruit, sour herbs, or the like, the best medicine on the first appearance of the symptoms is a dram of brandy, gin, or any good spirits. The patient should likewise sit with his feet upon a warm hearth-stone, or apply warm bricks to them; and warm cloths may be applied to the stomach and bowels. This is the only cholic wherein ardent spirits, spices, or any thing of a hot nature, may be ventured upon. Nor indeed are they to be used here unless at the very beginning, before any symptoms of inflammation appear. The bilious cholic is attended with very acute pains about the region of the navel. The patient complains of great thirst, and is generally costive. He vomits a hot, bitter, yellow-coloured, bile, which, being discharged, seems to afford some relief, but is quickly followed by the same violent pain as before. As the distemper advances, the propensity to vomit sometimes increases so as to become almost continual, and the proper motion of the intestines is so far perverted, that there are all the symptoms of an impending iliac passion. If the patient be young and strong, and the pulse full and frequent, it will be proper to bleed, after which clysters may be administered. Clear whey or gruel, sharpened with the juice of lemon, or cream of tartar, must be drunk freely: it will be necessary likewise to foment the belly with cloths dipped in warm water; and, if this should not succeed, the patient must be immersed up to the breast in warm water. In the bilious cholic, the vomiting is often very difficult to restrain. When this happens, the patient may drink a decoction of toasted bread, or an infusion of garden-mint in boiling water. Such as are liable to frequent returns of the bilious cholic should use flesh sparingly, and live chiefly upon a light vegetable diet. They should likewise take frequently a dose of cream of tartar with tamarinds, or any other cool acid purge. The hysseric cholic bears a great resemblance to the bilious. It is attended with acute pains about the region of the stomach, vomiting, &c. But what the patient vomits in this case is commonly of a greenish colour. There is a great sinking of the spirits, with dejection of mind and difficulty of breathing, which are the characteristic symptoms of this disorder. Sometimes it is accompanied with the jaundice; but this generally goes off of its own accord in a few days. In this cholic all evacuations, as bleeding, purging, vomiting, &c. do hurt. Every thing that
weakens

weakens the patient, or sinks the spirits, is to be avoided. If however the vomiting should prove violent, lukewarm water, or small posset, may be drunk, to cleanse the stomach. Afterwards the patient may take fifteen, twenty, or twenty-five, drops of liquid laudanum in a glass of cinnamon-water. This may be repeated every ten or twelve hours till the symptoms abate. The nervous cholic prevails among miners, smelters of lead, plumbers, the manufacturers of white lead, &c. It is very common in the cyder counties of England, and is supposed to be occasioned by the leaden vessels used in preparing that liquor. No disease of the bowels is attended with more excruciating pain than this. Nor is it soon at an end. I have known it continue eight or ten days with very little intermission, the body all the while continuing bound in spite of medicine, yet at length yield, and the patient recover. It generally however leaves the patient weak, and often ends in a palsy. The general treatment of this disease is the same with that of the iliac passion, or inflammation of the bowels.

INFLAMMATION OF THE KIDNIES.

THIS disease may proceed from any of those causes which produce an inflammatory fever. It may likewise be occasioned by wounds or bruises of the kidneys; small stones or gravel lodging within them; by hard riding or walking, especially in hot weather; or whatever drives the blood too forcibly into the kidneys may occasion this malady.

CURE.---Every thing of a heating or stimulating nature is to be avoided. Emollient and thin liquors must be plentifully drunk; as clear whey, or baum-tea sweetened with honey, decoctions of marsh-mallow roots, with barley and liquorice, &c. Bleeding is generally necessary, especially at the beginning. Ten or twelve ounces may be let from the arm or foot; and, if the pain and inflammation continue, the operation may be repeated in twenty-four hours, especially if the patient be of a full habit. Leeches may likewise be applied to the hæmorrhoidal veins, as a discharge from these will greatly relieve the patient. Cloths dipped in warm water, or bladders filled with it, must be applied as near as possible to the part affected, and renewed as they grow cool. If the bladders be filled with a decoction of mallows and camomile flowers, to which a little saffron is added, and mixed with about a third part of new milk, it will be still more beneficial. Emollient clysters ought frequently to be administered; and, if these do not open the body, a little salt and honey or manna may be added to them. The same course is to be followed where gravel or a stone is lodged in the kidney; but, when the gravel or stone is separated from the kidney, and lodges in the ureter, it will be proper, besides the fomentations, to rub the small of the back with sweet oil, and to give gentle diuretics: as juniper-

niper-water sweetened with the syrup of marsh-mallows; a tea-spoonful of the sweet spirits of nitre, with a few drops of laudanum, may now and then be put in a cup of the patient's drink. He ought likewise to take exercise on horseback or in a carriage if he be able to bear it.

INFLAMMATION OF THE BLADDER.

THE inflammation of the bladder proceeds, in a great measure, from the same causes as that of the kidneys. It is known by an acute pain towards the bottom of the belly, and difficulty of passing urine, with some degree of fever, a constant inclination to go to stool, and a perpetual desire to make water. This disease must be treated on the same principles as the one immediately preceding. The patient should abstain from every thing that is of a hot, acrid, and stimulating, quality, and should live entirely upon small broths, gruels, or mild vegetables. But a stoppage of urine may proceed from other causes besides an inflammation of the bladder; as a swelling of the hæmorrhoidal veins, hard fæces in the rectum; a stone in the bladder; excrescences in the urinary passages, a palsy of the bladder, hysteric affections, &c. In all which cases, mild and gentle applications are the safest; strong diuretic medicines, or things of an irritating nature, generally increase the danger. I have known some persons kill themselves by introducing probes into the urinary passages, to remove, as they thought, somewhat that obstructed the discharge of urine; and others bring on a violent inflammation of the bladder, by using strong diuretics, as oil of turpentine, &c. for that purpose.

INFLAMMATION OF THE LIVER.

THIS disease is known by a painful tension of the right side under the false ribs, attended with some degree of fever, a sense of weight, or fulness of the part, difficulty of breathing, loathing of food, great thirst, with a pale or yellowish colour of the skin and eyes. This disease, if properly treated, is seldom mortal. If it ends in a suppuration, and the matter cannot be discharged outwardly, the danger is then great. When the scirrhus of the liver ensues, the patient, if he observes a proper regimen, may nevertheless live a number of years; but, if he indulge in animal food and strong liquors, or take medicines of an acrid or irritating nature, the scirrhus will be converted into a cancer, which must infallibly prove fatal.

CURE.---The same regimen is to be observed in this as in other inflammatory disorders. All hot things are to be carefully avoided, and cool diluting liquors, as whey, barley-water, &c. drunk freely. The food must be light and thin, and the body, as well as the mind, kept easy and quiet. Bleeding is proper at the beginning; and it will often be necessary, even though the pulse should not feel hard, to repeat it.

it. All violent purgatives are to be avoided; the body however must be kept gently open. A decoction of tamarinds, with a little honey or manna, will answer this purpose very well. The side affected must be fomented in the manner directed in the foregoing diseases. Mild laxative clysters should be frequently administered; and, if the pain should notwithstanding continue violent, a blistering-plaster may be applied over the part affected. Medicines which promote the secretion of urine have a very good effect here. For this purpose, half a drachm of purified nitre, or a tea-spoonful of the sweet spirits of nitre, may be taken in a cup of the patient's drink three or four times a-day. All inflammations of the viscera must in general be treated upon the same principles as those already mentioned. The chief rule, with respect to all of them, is to let blood, to avoid every thing that is strong, or of a heating nature, to apply warm fomentations to the part affected, and to cause the patient to drink a sufficient quantity of warm diluting liquors.

OF THE CHOLERA MORBUS.

THE cholera morbus is a violent purging and vomiting, attended with gripes, sickness, and a constant desire to go to stool. It comes on suddenly, and is most common in autumn. There is hardly any disease that kills more quickly than this, when proper means are not used in due time for removing it. It is generally preceded by the heart-burn, sour belchings, and flatulences, with pain of the stomach and intestines. To these succeed excessive vomiting, and purging of green, yellow, or blackish, coloured bile, with a distention of the stomach, and violent griping pains. There is likewise a great thirst, with a very quick unequal pulse, and often a fixed acute pain about the region of the navel. As the disease advances, the pulse often sinks so low as to become quite imperceptible, the extremities grow cold, or cramped, and are often covered with a clammy sweat; the urine is obstructed, and there is a palpitation of the heart. Violent hiccup, fainting, and convulsions, are the signs of approaching death.

CURE.---At the beginning of this disease, the efforts of nature to expel the offending cause should be assisted, by promoting the purging and vomiting. For this purpose the patient must drink freely of diluting liquors; as whey, buttermilk, warm water, thin water-gruel, small posset, or, what is perhaps preferable to any of them, very weak chicken broth. This should not only be drunk plentifully to promote the vomiting, but a clyster of it given every hour in order to promote the purging. Warm negus, or strong wine whey, will likewise be necessary to support the patient's spirits, and promote perspiration. His legs should be bathed in warm water, and afterwards rubbed with flannel cloths, or wrapped in warm blankets, and warm bricks applied to the soles of his feet. Flannels wrung out of

warm spirituous fomentations should likewise be applied to the region of the stomach. When the violence of the disease is over, to prevent a relapse, it will be necessary, for some time, to continue the use of small doses of laudanum. Ten or twelve drops may be taken in a glass of wine, at least twice a-day, for eight or ten days. The patient's food ought to be nourishing, but taken in small quantities, and he should use moderate exercise. As the stomach and intestines are generally much weakened, an infusion of the bark, or bitter herbs, in small wine, sharpened with the elixir of vitriol, may be drunk for some time.

OF A DIARRHŒA, OR LOOSENESS.

A LOOSENESS, in many cases, is not to be considered as a disease, but rather as a salutary evacuation. It ought therefore never to be stopped unless when it continues too long, or evidently weakens the patient.

CURE.—A looseness, occasioned by the obstruction of any customary evacuation, generally requires bleeding. If that does not succeed, other evacuations may be substituted in the room of those which are obstructed. At the same time, every method is to be taken to restore the usual discharges, as not only the cure of the disease, but the patient's life, may depend on this. A diarrhœa, or looseness, which proceeds from violent passions or affections of the mind, must be treated with the greatest caution. Vomits in this case are highly improper. Nor are purges safe, unless they be very mild, and given in small quantities. Opiates, and other antispasmodic medicines, are more proper. Ten or twelve drops of liquid laudanum may be taken in a cup of valerian or penny-royal tea, every eight or ten hours, till the symptoms abate. Ease, cheerfulness, and tranquility of mind, are here of the greatest importance. When a looseness proceeds from acrid or poisonous substances taken into the stomach, the patient must drink large quantities of diluting liquors, with oil or fat broths, to promote vomiting and purging. Afterwards, if there be reason to suspect that the bowels are inflamed, bleeding will be necessary. Small doses of laudanum may likewise be taken to remove their irritation. From whatever cause a looseness proceeds, when it is found necessary to check it, the diet ought to consist of rice boiled with milk, and flavoured with cinnamon; rice-jelly; sago, with red port; and the lighter sorts of flesh-meat roasted. The drink may be thin water-gruel, rice-water, or weak broth made from lean veal, or with a sheep's head, as being more gelatinous than mutton, beef, or chicken-broth.

OF VOMITING.

VOMITING may proceed from various causes, as excess in eating and drinking, foulness of the stomach, the acrimony of the aliments, a translation of the morbid

morbific matter of ulcers, of the gout, the erysipelas, or other diseases, to the stomach and bowels.

CURE.---When vomiting proceeds from a foul stomach or indigestion, it is not to be considered as a disease, but as the cure of a disease. It ought therefore to be promoted by drinking lukewarm water, or thin gruel. If this does not put a stop to the vomiting, a dose of ipecacuanha may be taken, and worked off with weak camomile-tea. If vomiting proceeds from weakness of the stomach, bitters will be of service. Peruvian bark infused in wine or brandy, with as much rhubarb as will keep the body gently open, is an excellent medicine in this case. The elixir of vitriol is also a good medicine; it may be taken in the dose of fifteen or twenty drops, twice or thrice a day, in a glass of wine or water. Habitual vomitings are sometimes alleviated by making oysters a principal part of diet. A vomiting, which proceeds from acidities in the stomach, is relieved by alkaline purges. The best medicine of this kind is the *magnesia alba*, a tea-spoonful of which may be taken in a dish of tea or a little milk, three or four times a-day, or oftener if necessary, to keep the body open. I have always found the saline draughts, taken in the act of effervescence, of singular use in stopping a vomiting, from whatever cause it proceeded. These may be prepared by dissolving a drachm of the salt of tartar in an ounce and a half of fresh lemon juice, and adding to it an ounce of peppermint-water, the same quantity of simple cinnamon-water, and a little white sugar. This draught must be swallowed before the effervescence is quite over, and may be repeated every two hours, or oftener, if the vomiting be violent.

OF THE DIABETES.

IN a diabetes, the urine generally exceeds in quantity all the liquid food which the patient takes. It is thin and pale, of a sweetish taste, and an agreeable smell. The patient has a continual thirst, with some degree of fever; his mouth is dry, and he spits frequently a frothy spittle. The strength fails, the appetite decays, and the flesh wastes away till the patient is reduced to skin and bone. There is a heat of the bowels; and frequently the loins, testicles, and feet, are swelled.

CURE.---This disease may generally be cured at the beginning; but, after it has continued long, the cure becomes very difficult. Every thing that stimulates the urinary passages, or tends to relax the habit, must be avoided. For this reason the patient should live chiefly on solid food. His thirst may be quenched with acids; as sorrel, juice of lemon, or vinegar. The mucilaginous vegetables, as rice, sago, and salop, with milk, are the most proper food. Of animal substances, shell-fish are to be preferred; as oysters, crabs, &c. The drink may be Bristol-water; when that cannot be obtained, lime-water, in which a due proportion of oak-bark has

been macerated, may be used. The patient ought daily to take exercise, but it should be so gentle as not to fatigue him. He should lie upon a hard bed or mattress; nothing hurts the kidneys more than lying too soft. Gentle purges, if the patient be not too much weakened by the disease, have a good effect. They may consist of rhubarb, with cardamum seeds, or any other spices, infused in wine, and may be taken in such quantity as to keep the body gently open. The patient must next have recourse to astringents and corroborants. Half a drachm of powder, made of equal parts of alum and the inspissated juice commonly called *terra japonica*, may be taken four times a-day, or oftener, if the stomach will bear it; otherwise, Peruvian bark steeped in red wine. Opiates are of service in this disease, even though the patient rests well. They take off spasm and irritation, and at the same time lessen the force of the circulation. Ten or twelve drops of liquid laudanum may be taken in a cup of the patient's drink three or four times a-day.

OF A SUPPRESSION OF URINE.

A SUPPRESSION of urine may proceed from various causes; as an inflammation of the kidneys or bladder, small stones or gravel lodging in the urinary passages, hard fæces lying in the rectum, pregnancy, a spasm or contraction of the neck of the bladder, clotted blood in the bladder itself, a swelling of the hæmorrhoidal veins, &c.

CURE.---We would chiefly recommend, in all obstructions of urine, fomentations and evacuants. Bleeding, as far as the patient's strength will permit, is necessary, especially where there are symptoms of topical inflammation. Bleeding in this case not only abates the fever, by lessening the force of the circulation, but, by relaxing the solids, it takes off the spasm or stricture upon the vessels which occasioned the obstruction. After bleeding, fomentations must be used. These may either consist of warm water alone, or of decoctions of mild vegetables; as mallows, camomile flowers, and such other herbs as are recommended in the Herbal. Cloths dipped in these may either be applied to the part affected, or a large bladder filled with the decoction may be kept continually upon it. Persons subject to a suppression of urine ought to live very temperate. Their diet should be light, and their liquor diluting. They should avoid all acids and austere wines, should take sufficient exercise, lie hard, and avoid study and sedentary occupations.

OF THE GRAVEL AND STONE.

THE stone and gravel may be occasioned by high living; the use of strong astringent wines; a sedentary life; lying too hot, soft, or too much on the back; the constant use of water impregnated with earthy or stony particles; aliments of an astringent

astringent or windy nature, &c. It may likewise proceed from an hereditary disposition. Persons in the decline of life, and those who have been much afflicted with the gout or rheumatism, are most liable to it.

CURE.---Persons afflicted with the gravel or stone should avoid aliments of a windy or heating nature, as salt meats, sour fruits, &c. Their diet ought chiefly to consist of such things as tend to promote the secretion of urine, and to keep the body open. Artichokes, asparagus, spinnage, lettuce, parsley, succory, purslane, turnips, potatoes, carrots, and raddishes, may be safely eaten. Onions, leeks, and cellery, are, in this case, reckoned medicinal. The most proper drinks are whey, butter-milk, milk and water, barley-water; decoctions or infusions of the roots of marsh-mallows, parsley, liquorice, or of other mild mucilaginous vegetables, as linseed, lime-tree buds or leaves, &c. If the patient has been accustomed to generous liquors, he may drink small gin-punch without acid. In what is called a fit of the gravel, which is commonly occasioned by a stone sticking in the ureter or some part of the urinary passages, the patient must be bled; warm fomentations should likewise be applied to the part affected, emollient clysters administered, and diluting mucilaginous liquors drunk, &c. The treatment in this case must be the same as pointed out for an inflammation of the kidneys and bladder, &c. Patients who are subject to frequent fits of gravel in the kidneys, but have no stone in the bladder, are advised to drink every morning, two or three hours before breakfast, an English pint of oyster or cockle-shell lime-water; for, though this quantity might be too small to have any sensible effect in dissolving a stone in the bladder, yet it may very probably prevent its growth. When a stone is formed in the bladder, Alicant soap, and oyster or cockle-shell lime-water may be taken in the following manner: the patient must swallow every day, in any form that is least disagreeable, an ounce of the internal part of Alicant soap, and drink three or four English pints of oyster or cockle-shell lime-water. The soap is to be divided into three doses; the largest to be taken fasting in the morning early; the second at noon; and the third at seven in the evening; drinking with each dose a large draught of the lime-water; the remainder of which he may take any time betwixt dinner and supper, instead of other liquors. The caustic alkali, or soap-lees, is the medicine chiefly in vogue at present for the stone. It may be prepared by mixing two parts of quick-lime with one of pot-ashes, and suffering them to stand till the lixivium be formed, which must be carefully filtrated before it be used. If the solution does not happen readily, a small quantity of water may be added to the mixture. The patient must begin with small doses of the lees, as thirty or forty drops, and increase by degrees, as far as the stomach will bear it.

OF INVOLUNTARY DISCHARGES OF BLOOD.

INVOLUNTARY discharges of blood are so far from being always dangerous, that they prove often salutary. When such discharges are critical, which is frequently the case in fevers, they ought not to be stopped. Nor indeed is it proper at any time to stop them, unless they be so great as to endanger the patient's life. Most people, afraid of the smallest discharge of blood from any part of the body, fly immediately to the use of styptic and astringent medicines, by which means an inflammation of the brain, or some other fatal disease, is occasioned, which, had the discharge been allowed to go on, might have been prevented. Periodical discharges of blood, from whatever part of the body they proceed, must not be stopped. They are always the efforts of nature to relieve herself; and fatal diseases have often been the consequence of obstructing them. It may indeed be sometimes necessary to check the violence of such discharges; but even this requires the greatest caution. In the early period of life, bleeding at the nose is very common. Those who are farther advanced in years are more liable to *hæmoptoe*, or discharges of blood from the lungs. After the middle period of life, hæmorrhoidal fluxes are most common; and, in the decline of life, discharges of blood from the urinary passages. Bleeding at the nose, to persons who abound with blood, is very salutary. It often cures a vertigo, the head-ach, a phrenzy, and even an epilepsy. In fevers, where there is a great determination of blood towards the head it is of the utmost service. It is likewise beneficial in inflammations of the liver and spleen, and often in the gout and rheumatism. In all diseases where bleeding is necessary, a spontaneous discharge of blood from the nose is of much more service than the same quantity let with a lancet. Whenever bleeding at the nose relieves any bad symptom, and does not proceed so far as to endanger the patient's life, it ought not to be stopped. But, when it returns frequently, or continues till the pulse becomes low, the extremities begin to grow cold, the lips pale, or the patient complains of being sick, or faint, it must immediately be stopped.

CURE.---Let the patient be set nearly upright, with his head reclining a little, and his legs immersed in water about the warmth of new milk. His hands ought likewise to be put in lukewarm water, and his garters may be tied a little tighter than usual. Ligatures may be applied to the arms, about the place where they are usually made for bleeding, and with nearly the same degree of tightness. These must be gradually slackened as the blood begins to stop, and removed entirely as soon as it gives over. Sometimes dry lint put up the nostrils will stop the bleeding. When this does not succeed, doffils of lint dipped in strong spirits of wine, may be put up the nostrils; or, if that cannot be had, they may be dipped in brandy.

If the genitals be immersed for some time in cold water, it will generally stop a bleeding at the nose. I have seldom known this fail.

OF THE BLEEDING AND BLIND PILES.

A DISCHARGE of blood from the hæmorrhoidal vessels is called the bleeding piles. When the vessels only swell, and discharge no blood, but are exceeding painful, the disease is called the blind piles. This discharge, however, is not always to be treated as a disease. It is even more salutary than bleeding at the nose, and often prevents or carries off diseases. It is peculiarly beneficial in the gout, rheumatism, asthma, and hypochondriacal complaints, and often proves critical in cholics and inflammatory fevers.

CURE.---In the management of the patient, regard must be had to his habit of body, his age, strength, and manner of living. A discharge, which might be excessive and prove hurtful to one, may be very moderate, and even salutary, to another. That only is to be esteemed dangerous which continues too long, and is in such quantity as to waste the patient's strength, hurt the digestion, nutrition, and other functions necessary to life. The Peruvian bark is proper in this case, both as a strengthener and astringent. Half a drachm of it may be taken in a glass of red wine, sharpened with a few drops of the elixir of vitriol, three or four times a day. The bleeding piles are sometimes periodical, and return regularly once a month, or once in three weeks. In this case they are always to be considered as a salutary discharge, and by no means to be stopped. In the blind piles, bleeding is generally of use. The diet must be light and thin, and the drink cool and diluting. It is likewise necessary that the body be kept gently open. When the piles are exceeding painful and swelled, but discharge nothing, the patient must sit over the steams of warm water. He may likewise apply a linen cloth dipped in warm spirits of wine to the part, or poultices made of bread and milk, or of leeks fried with butter. If these do not produce a discharge, and the piles appear large, leeches must be applied as near them as possible, or, if they will fix upon the piles, themselves, so much the better. When leeches will not fix, the piles may be opened with a lancet. The operation is very easy, and is attended with no danger. When the pain is very great, a liniment made of two ounces of emollient ointment, and half an ounce of liquid laudanum, beat up with the yolk of an egg, may be applied.

SPITTING OF BLOOD.

PERSONS of a slender make and a lax fibre, who have long necks and strait breasts, are most liable to this disease. It is most common in the spring, and generally attacks people before they arrive at the prime or middle period of life. It is a common

common observation, that those who have been subject to bleeding at the nose when young, are afterwards most liable to this complaint. It is often occasioned by excessive drinking, running, wrestling, singing, or speaking aloud. Such as have weak lungs ought to avoid all violent exertions of that organ, as they value life. They should also guard against violent passions, excessive drinking, and every thing that occasions a rapid circulation of the blood. It is often the effect of a long and violent cough; in which case it is generally the forerunner of a consumption. Spitting of blood is not always to be considered as a primary disease. It is often only a symptom, and in some diseases not an unfavourable one: this is the case in pleurisy, peripneumonies, and sundry other fevers. In a dropsy, scurvy, or consumption, it is a bad symptom, and shews that the lungs are ulcerated.

CURE.---This, like the other involuntary discharges of blood, ought not to be suddenly stopped by astringent medicines. It may however proceed so far as to weaken the patient, and even endanger his life, in which case proper means must be used for restraining it. The body should be kept gently open by laxative diet, as roasted apples, stewed prunes, and such-like. If these should not have the desired effect, a tea-spoonful of the lenitive electuary may be taken twice or thrice a-day, as is found necessary. If the bleeding proves violent, ligatures may be applied to the extremities, as directed for a bleeding at the nose. If the patient be hot or feverish, bleeding and small doses of nitre will be of use; a scruple or half a drachm of nitre may be taken in a cup of his ordinary drink twice or thrice a-day. If stronger astringents be necessary, fifteen or twenty drops of the acid elixir of vitriol may be given in a glass of water three or four times a-day.

VOMITING OF BLOOD.

THIS disease often proceeds from an obstruction of the menses in women, and sometimes from the stopping of the hæmorrhoidal flux in men. It may be occasioned by any thing that greatly stimulates or wounds the stomach, as strong vomits or purges, acrid poisons, sharp or hard substances taken into the stomach, &c. It is often the effect of obstructions in the liver, the spleen, or some of the other viscera. It may likewise proceed from external violence, as blows or bruises, or from any of the causes which produce inflammation. In hysteric women, vomiting of blood is a very common, but by no means a dangerous, symptom.

CURE.---A great part of the danger in this disease arises from the extravasated blood lodging in the bowels, and becoming putrid, by which means a dysentery or putrid fever may be occasioned. The best way of preventing this, is to keep the body gently open, by frequently exhibiting emollient clysters. After the discharge is over, as the patient is generally troubled with gripes, occasioned by the acrimony of the blood lodged in the intestines, gentle purges will be necessary.

OF BLOODY URINE.

THIS discharge is more or less dangerous, according to the different circumstances which attend it. When pure blood is voided suddenly without interruption and without pain, it proceeds from the kidneys; but, if the blood be in small quantity, of a dark colour, and emitted with heat and pain about the bottom of the belly, it proceeds from the bladder. Bloody urine is always attended with some degree of danger; but it is peculiarly so when mixed with purulent matter, as this shews an ulcer somewhere in the urinary passages.

CURE.---When there is reason to suspect an ulcer in the kidneys or bladder, the patient's diet must be cool, and his drink of a soft, healing, balsamic, quality, as decoctions of marsh-mallow roots with liquorice, solutions of gum-arabic, &c. Three ounces of marsh-mallow roots, and half an ounce of liquorice, may be boiled in two English quarts of water to one; two ounces of gum-arabic, and half an ounce of purified nitre, may be dissolved in the strained liquor, and a tea-cupful of it taken four or five times a-day. The early use of astringents in this disease has often bad consequences. When the flux is stopped too soon, the grumous blood, by being confined in the vessels, may produce inflammations, abscesses, and ulcers. If however the case be urgent, or the patient seems to suffer from the loss of blood, gentle astringents may be necessary. In this case the patient may take three or four ounces of lime-water, with half an ounce of the tincture of Peruvian bark, three times a-day.

OF THE DYSENTERY, OR BLOODY FLUX.

THIS disease is known by the flux of the belly, attended with violent pain of the bowels, a constant inclination to go to stool, and generally more or less blood in the stools. It begins, like other fevers, with chillness, loss of strength, a quick pulse, great thirst, and an inclination to vomit. The stools are at first greasy or frothy, afterwards they are streaked with blood, and, at last, have frequently the appearance of pure blood, mixed with small filaments, resembling bits of skin.

CURE.---Nothing is of more importance in this disease than cleanliness. It contributes greatly to the recovery of the patient, and no less to the safety of such as attend him. Every thing about the patient should be frequently changed. The excrements should never be suffered to continue in his chamber, but be removed immediately, and buried under ground. A constant stream of fresh air should be admitted into the chamber; and it ought frequently to be sprinkled with vinegar, juice of lemon, or some other strong acid. At the beginning of this disease it is always necessary to cleanse the first passages. For this purpose a vomit of ipecacuanha must be given, and wrought off with weak camomile-tea. Strong vomits are seldom

necessary here. A scruple, or at most half a drachm, of ipecacuanha, is generally sufficient for an adult, and sometimes a very few grains will suffice. The day after the vomit, half a drachm, or two scruples, of rhubarb, must be taken; or, what will answer the purpose rather better, an ounce or an ounce and a half of Epsom salts. This dose may be repeated every other day for two or three times. Afterwards small doses of ipecacuanha may be taken for some time. Two or three grains of the powder may be mixed in a table-spoonful of the syrup of poppies, and taken three times a-day. These evacuations will often be sufficient to effect a cure. Should it happen otherwise, the following astringent medicines may be used. A clyster of starch or fat mutton-broth, with thirty or forty drops of liquid laudanum in it, may be administered twice a-day. At the same time an ounce of gum-arabic, and half an ounce of gum tragacanth, may be dissolved in an English pint of barley-water, over a slow fire, and a table-spoonful of it taken every hour. When dysenteries prevail, we would recommend a strict attention to cleanliness, a spare use of animal food, and the free use of sound ripe fruits, and other vegetables. We would also advise such as are liable to them to take either a vomit or a purge every spring or autumn, as a preventive.

OF THE JAUNDICE.

THE immediate cause of the jaundice is an obstruction of the bile. The patient at first complains of excessive weariness, and has great aversion to every kind of motion. His skin dry, and he generally feels a kind of itching or pricking pain over the whole body. If the patient be young, and the disease complicated with no other malady, it is seldom dangerous; but in old people, where it continues long, returns frequently, or is complicated with the dropsy or hypochondriac symptoms, it generally proves fatal. The black jaundice is generally more dangerous than the yellow.

CURE.---The patient should take as much exercise as he can bear, either on horseback or in a carriage; walking, running, and even jumping, are likewise proper, provided he can bear them without pain, and there be no symptoms of inflammation. Patients have been often cured of this disease by a long journey, after medicines had proved ineffectual. If the patient be young, of a full sanguine habit, and complains of pain in the right side about the region of the liver, bleeding will be necessary. After this a vomit must be administered, and, if the disease proves obstinate, it may be repeated once or twice. No medicines are more beneficial in the jaundice than vomits, especially where it is not attended with inflammation. Half a drachm of ipecacuanha in powder will be a sufficient dose for an adult. It may be wrought off with weak camomile-tea, or lukewarm water. Fomenting the parts about the region of the stomach and liver, and rubbing them with a warm hand or flesh-

flesh-brush, are likewise beneficial ; but it is still more so for the patient to sit in a bath of warm water up to the breast. He ought to do this frequently, and should continue in it as long as his strength will permit. Numberless British herbs are certain cures for this disease, as may be seen in the Herbal. I have known considerable benefit, in a very obstinate jaundice, from a decoction of hempseed. Four ounces of the seed may be boiled in two English quarts of ale, and sweetened with coarse sugar. The dose is half a pint every morning. It may be continued for eight or nine days. A very obstinate jaundice has been cured by swallowing raw eggs. Persons subject to the jaundice ought to take as much exercise as possible, and to avoid all heating and astringent aliments. If it attacks maidens after the age of puberty, marriage is a certain cure.

OF THE DROPSY.

THE dropsy is often owing to an hereditary disposition. It may likewise proceed from drinking ardent spirits or other strong liquors. It is true almost to a proverb, that great drinkers die of a dropsy. The want of exercise is also a very common cause of the dropsy. Hence it is justly reckoned among the diseases of the sedentary. It often proceeds from excessive evacuations, as frequent and copious bleedings, strong purges often repeated, frequent salivations, &c. The sudden stoppage of customary or necessary evacuations, as the menses, the hæmorrhoids, fluxes of the belly, and, in short, whatever obstructs the perspiration, or prevents the blood from being duly prepared, occasions a dropsy. It generally begins with a swelling of the feet and ankles towards night, which, for some time, disappears in the morning. In the evening the parts, if pressed with the finger, will pit. The swelling gradually ascends, and occupies the trunk of the body, the arms, and the head. Afterwards the breathing becomes difficult, the urine is in small quantity, and the thirst great ; the body is bound, and the perspiration is greatly obstructed. To these succeed torpor, heaviness, a slow wasting fever, and a troublesome cough. This last is generally a fatal symptom, as it shews that the lungs are affected. When the disease comes suddenly on, and the patient is young and strong, there is reason to hope for a cure, especially if medicine be given early. But, if the patient be old, has led an irregular or a sedentary life, or if there be reason to suspect that the liver, lungs, or any of the viscera, are unsound, there is great ground to fear that the consequences will prove fatal.

CURE.---The patient must abstain, as much as possible, from all drink, especially weak and watery liquors, and must quench his thirst with mustard-whey, or acids, as juice of lemons, oranges, sorrel, or such like. His aliment ought to be dry, of a stimulating and diuretic quality, as toasted bread; the flesh of birds, or
other.

other wild animals, roasted; pungent and aromatic vegetables, as garlic, mustard, onions, cressés, horse-raddish, rocambolè, shalot, &c. He may also eat sea-biscuit dipt in wine or a little brandy. This is not only nourishing, but tends to quench thirst. Some have been actually cured of a dropy by a total abstinence from all liquids, and living entirely upon such things as are mentioned above. If the patient must have drink, the Spa-water, or Rhenish wine, with diuretic medicines infused in it, are the best. Exercise is of the greatest importance in a dropy. If the patient be able to walk, dig, or the like, he ought to continue these exercises as long as he can. If he is not able to walk or labour, he must ride on horseback, or in a carriage, and the more violent the motion so much the better, provided he can bear it. If the disease has come on suddenly, it may generally be removed by strong vomits, brisk purges, and such medicines as promote a discharge by sweat and urine. For an adult, half a drachm of ipecacuanha in powder, and half an ounce of oxymel of squills, will be a proper vomit. This may be repeated as often as is found necessary, three or four days intervening between the doses. The patient must not drink much after taking the vomit, otherwise he destroys its effects. A cup or two of camomile-tea will be sufficient to work it off. Betwixt each vomit, on one of the intermediate days, the patient may take the following purge: Jalap in powder half a drachm, cream of tartar two drachms, calomel six grains. These may be made into a bolus with a little syrup of pale roses, and taken early in the morning. The less the patient drinks after it the better. If he be much griped, he may take now and then a cup of chicken-broth. The patient may likewise take every night at bed-time the following bolus: To four or five grains of camphor add one grain of opium, and as much syrup of orange-peel as is sufficient to make them into a bolus. This will generally promote a gentle sweat, which should be encouraged by drinking now and then a small cup of white wine whey, with a tea-spoonful of the spirits of hartshorn in it. A tea-cupful of the following diuretic infusion may likewise be taken every four or five hours through the day: Take juniper berries, mustard seed, and horse-radish, of each half an ounce, ashes of broom half a pound; infuse them in a quart of Rhenish wine or strong ale for a few days, and afterwards strain off the liquor. Such as cannot take this infusion, may use the decoction of seneka-root, which is both diuretic and sudorific. I have known an obstinate anasarca cured by an infusion of the ashes of broom in wine. The above course will often cure an incidental dropy, if the constitution be good; but, when the disease proceeds from a bad habit, or an unsound state of the viscera, strong purges and vomits are not to be ventured upon. In this case, the safer course is to palliate the symptoms by the use of such medicines as promote the secretions, and to support the patient's strength by warm and nourishing cordials. The secretion

urine

urine may be greatly promoted by nitre. Brookes says, he knew a young woman who was cured of a dropfy by taking a drachm of nitre every morning in a draught of ale, after she had been given over as incurable; and a large spoonful of unbruised mustard-feed taken every night and morning, and drinking half a pint of the decoction of the tops of green broom after it, has performed cures when other powerful medicines have proved ineffectual. When the disease does not evidently and speedily give way to purgative and diuretic medicines, the water ought to be let off by tapping. This is a very simple and safe operation, and would often succeed, if it were performed in due time; but, if it be delayed till the humours are vitiated, or the bowels spoiled by long soaking in water, it can hardly be expected that any permanent relief will be procured. After the evacuation of the water, the patient is to be put on a course of strengthening medicines; as the Peruvian bark, the elixir of vitriol, warm aromatics, with a due proportion of rhubarb infused in wine, and such like.

OF THE GOUT.

THERE is no disease which shews the imperfection of medicine, or sets the advantages of temperance and exercise in a stronger light, than the gout. Excess and idleness are the true sources from whence it originally sprang, and all who would avoid it must be active and temperate. As there are no medicines yet known that will cure the gout, we shall confine our observations chiefly to regimen, both in and out of the fit. In the fit, if the patient be young and strong, his diet ought to be thin and cooling, and his drink of a diluting nature; but, where the constitution is weak, and the patient has been accustomed to live high, this is not a proper time to retrench. In this case he must keep nearly to his usual diet, and should take frequently a cup of strong negus, or a glass of generous wine. Wine-why is a very proper drink in this case, as it promotes the perspiration without greatly heating the patient. It will answer this purpose better if a tea-spoonful of *sal volatile oleosum*, or spirits of hartshorn, be put into a cup of it twice a-day. It will likewise be proper to give at bed-time a tea-spoonful of the volatile tincture of *guaiacum* in a large draught of warm wine-why. This will greatly promote perspiration through the night. As the most safe and efficacious method of discharging the gouty matter is by perspiration, this ought to be kept up by all means, especially in the affected part. For this purpose the leg and foot should be wrapped in soft flannel, fur, or wool. The last is most readily obtained, and seems to answer the purpose better than any thing else. The people of Lancashire look upon wool as a kind of specific in the gout. They wrap a great quantity of it about the leg and foot affected, and cover it with a skin of soft dressed leather. The wool which they use is generally greased, and carded or combed. They chuse

the softest which can be had, and seldom or never remove it till the fit be entirely gone off. All external applications that repel the matter are to be avoided as death. They do not cure the disease, but remove it from a safer to a more dangerous part of the body, where it often proves fatal. Many things will shorten a fit of the gout, and some will drive it off altogether; but nothing has yet been found which will do this with safety to the patient. In pain we eagerly grasp at any thing that promises immediate ease, and even hazard life itself for a temporary relief. This is the true reason why so many infallible remedies have been proposed for the gout, and why such numbers have lost their lives by the use of them. It would be as prudent to stop the small-pox from rising, and to drive it into the blood, as to attempt to repel the gouty matter after it has been thrown upon the extremities. The latter is as much an effort of nature to free herself from an offending cause as the former, and ought equally to be promoted. When the pain however is very great, and the patient is restless, thirty or forty drops of laudanum, more or less, according to the violence of the symptoms, may be taken at bed-time. This will ease the pain, procure rest, promote perspiration, and forward the crisis of the disease. Though it may be dangerous to stop a fit of the gout by medicine, yet, if the constitution can be so changed by diet and exercise, as to lessen or totally prevent its return, there certainly can be no danger in following such a course. It is well known that the whole habit may be so altered, by a proper regimen, as nearly to eradicate this disease; and those only who have sufficient resolution to persist in such a course have reason to expect a cure. The course which we would recommend for preventing the gout is as follows: in the first place, universal temperance; in the next place, sufficient exercise. By this we do not mean sauntering about in an indolent manner; but labour, sweat, and toil. These only can render the humours wholesome, and keep them so. Going early to bed, and rising betimes, are also of great importance. When the gout attacks the head or lungs, every method must be taken to fix it in the feet. They must be frequently bathed in warm water, and acrid cataplasms applied to the soles. Blisters ought likewise to be applied to the ancles or calves of the legs. Bleeding in the feet or ancles is also necessary, and warm stomachic purges. The patient ought to keep in bed for the most part, if there be any signs of inflammation, and should be very careful not to catch cold. If it attacks the stomach with a sense of cold, the most warm cordials are necessary; as strong wine boiled up with cinnamon or other spices, cinnamon-water, peppermint-water, and even brandy or rum. The patient should keep his bed, and endeavour to promote a sweat by drinking warm liquors; and, if he should be troubled with a nausea, or inclination to vomit, he may drink camomile-tea, or any thing that will make him vomit freely. Those who never had the gout, but who, from their constitution

constitution or manner of living, have reason to expect it, ought likewise to be very circumspect with regard to its first approach. If the disease, by wrong conduct or improper medicines, be diverted from its proper course, the miserable patient has a chance to be ever after tormented with head-achs, coughs, pains of the stomach and intestines; and to fall, at last, a victim to its attack upon some of the more noble parts.

OF THE RHEUMATISM.

THE causes of a rheumatism are frequently the same as those of an inflammatory fever; viz. an obstructed perspiration, the immoderate use of strong liquors, and the like. Sudden changes of the weather, and all quick transitions from heat to cold, are very apt to occasion the rheumatism. The acute rheumatism commonly begins with weariness, shivering, a quick pulse, restlessness, thirst, and other symptoms of fever. Afterwards the patient complains of flying pains, which are increased by the least motion. These at length fix in the joints, which are often affected with swelling and inflammation. If blood be let in this disease, it has generally the same appearance as in the pleurisy. In this kind of rheumatism the treatment of the patient is nearly the same as in an acute or inflammatory fever. If he be young and strong, bleeding is necessary, which may be repeated according to the exigencies of the case. The body ought likewise to be kept open by emollient clysters, or cool opening liquors; as decoctions of tamarinds, cream of tartar, whey, fenna tea, and the like. Warm bathing, after proper evacuations, has often an exceeding good effect. The patient may either be put into a bath of warm water, or have cloths wrung out of it applied to the parts affected. Great care must be taken that he do not catch cold after bathing. The chronic rheumatism is seldom attended with any considerable degree of fever, and is generally confined to some particular part of the body, as the shoulders, the back, or the loins. There is seldom any inflammation or swelling in this case. Persons in the decline of life are most subject to the chronic rheumatism. In such patients it often proves extremely obstinate, and frequently incurable. Though this disease may not seem to yield to medicines for some time, yet they ought to be persisted in. Persons who are subject to frequent returns of the rheumatism, will often find their account in using medicines, whether they be immediately affected with the disease or not. The chronic rheumatism is similar to the gout in this respect, that the most proper time for using medicines to extirpate it, is when the patient is most free from the disorder. There are several of our plants pointed out in the Herbal which may be used with great advantage in the rheumatism. One of the best is the white mustard; a table-spoonful of the seed of this plant may be taken twice or thrice a-day, in a glass of

water or small wine. The water-trefoil is likewise of great use in this complaint; it may be infused in wine or ale, or drunk in form of tea. The ground-ivy, camomile, and several other bitters, are also beneficial, and may be used in the same manner. No benefit however is to be expected from these, unless they be taken for a considerable time. Excellent medicines are often despised in this disease, because they do not perform an immediate cure; whereas nothing would be more certain than their effect, were they duly persisted in. Want of perseverance in the use of medicines is one reason why chronic diseases are so seldom cured. Cold bathing, especially in salt water, often cures the rheumatism. We would also recommend riding on horseback, and wearing flannel next the skin. Issues are likewise very proper, especially in chronic cases. If the pain affects the shoulders, an issue may be made in the arm; but, if it affects the loins, it should be put in the leg or thigh.

OF THE SCURVY.

THE scurvy is occasioned by cold moist air; by the long use of salted or smoked provisions, or any kind of food that is hard of digestion, and affords little nourishment. It may also proceed from the suppression of customary evacuations; as the menses, the hæmorrhoidal flux, &c. It is sometimes owing to an hereditary taint, in which case a very small cause will excite the latent disorder. Grief, fear, and other depressing passions, have a great tendency both to excite and aggravate this disease. The same observation holds with regard to neglect of cleanliness; bad clothing, the want of proper exercise, confined air, unwholesome food, or any disease which greatly weakens the body or vitiates the humours.

CURE.---There is no way of curing this disease so effectually, as by pursuing a plan directly opposite to that which brings it on. It proceeds from a vitiated state of the humours, occasioned by errors in diet, air, or exercise; and this cannot be removed but by a proper attention to these important articles. When the scurvy has been brought on by a long use of salted provisions, the proper medicine is a diet consisting chiefly of fresh vegetables; as oranges, apples, lemons, limes, tamarinds, water-crests, scurvy-grass, brook-lime, &c. The use of these, with milk, pot-herbs, new bread, and fresh beer or cyder, will seldom fail to remove a scurvy of this kind, if taken before it be too far advanced; but, to have this effect, they must be persisted in for a considerable time. I have often seen very extraordinary effects in the land-scurvy from a milk diet. This preparation of nature is a mixture of animal and vegetable properties, which, of all others, is the most fit for restoring a decayed constitution, and removing that particular acrimony of the humours which seems to constitute the very essence of the scurvy and many other diseases. But people despise this wholesome and nourishing food, because it is cheap, and devour
with

with greediness flesh and fermented liquors, while milk is only deemed fit for their hogs. The most proper drink in the scurvy is whey or butter-milk. When these cannot be had, sound cyder, perry, or spruce beer, may be used. Wort has likewise been found to be a proper drink in the scurvy, and may be used at sea, as malt will keep during the longest voyage. A decoction of the tops of the spruce fir is likewise proper. It may be drunk in the quantity of an English pint twice a day. Tar-water may be used for the same purpose, or decoctions of any of the mild mucilaginous vegetables; sarsaparilla, marsh-mallow roots, &c. Infusions of the bitter plants, as ground-ivy, the smaller centaury, marsh-trefoil, &c. are likewise beneficial. The peasants, in some parts of Britain, express the juice of the last-mentioned plant, and drink it with good effect in those foul scorbutic eruptions with which they are often troubled in the spring season.

OF THE SCROPHULA, OR KING'S EVIL.

THIS disease proceeds often from an hereditary taint, from a scrophulous nurse, &c. Children who have the misfortune to be born of sickly parents, whose constitutions have been greatly injured by chronic diseases, are apt to be affected with the scrophula. It may likewise proceed from such diseases as weaken the habit or vitiate the humours, as the small-pox, measles, &c. At first small knots appear under the chin or behind the ears, which gradually increase in number and size, till they form one large hard tumour. This often continues for a long time without breaking, and, when it does break, it only discharges a thin watery humour. Other parts of the body are likewise liable to its attack, as the arm-pits, groins, feet, hands, eyes, breasts, &c. The white swellings of the joints seem likewise to be of this kind. They are with difficulty brought to a suppuration, and, when opened, they only discharge a thin ichor. There is not a more general symptom of the scrophula than a swelling of the upper lip and nose.

CURE.---In this complaint medicine is but of little use. It has been found, that keeping the body gently open, for some time, with sea-water, has a good effect. Bathing in salt water, and drinking it in such quantities as to keep the body gently open, will cure a scrophula, when medicines have been tried in vain. When salt water cannot be obtained, the patient may be bathed in fresh water, and his body kept open by small quantities of salt and water, or some other mild purgative. Next to cold bathing, and drinking the salt water, we would recommend the Peruvian bark. The cold bath may be used in summer, and the bark in winter. To an adult half a drachm of the bark in powder may be given, in a glass of red wine, four or five times a-day. Hemlock may sometimes be used with advantage in the scrophula. Some lay it down as a general rule, that the sea-water is most pro-

per before there are any suppuration or symptoms of tabes; the Peruvian bark, when there are running sores, and a degree of hectic fever; and the hemlock in old inveterate cases, approaching to the scirrhus or cancerous state. Either the extract or the fresh juice of this plant may be used. The dose must be small at first, and increased gradually as far as the stomach is able to bear it.

OF THE ITCH.

THE itch is seldom a dangerous disease, unless when it is rendered so by neglect, or improper treatment. If it be suffered to continue too long, it may vitiate the whole mass of humours; and, if it be suddenly thrown in, without proper evacuations, it may occasion fevers, inflammations of the viscera, or other internal disorders.

CURE.---The best medicine yet known for the itch is sulphur, which ought to be used both externally and internally. The parts most affected may be rubbed with an ointment made of the flour of sulphur, two ounces; crude sal ammoniac, finely powdered, two drachms; hogs lard, or butter, four ounces. If a scruple or half a drachm of the essence of lemon be added, it will entirely take away the disagreeable smell. About the bulk of a nutmeg of this may be rubbed upon the extremities, at bed-time, twice or thrice a week. It is seldom necessary to rub the whole body; but, when it is, it ought not to be done all at once, but by turns, as it is dangerous to stop too many pores at the same time. Before the patient begins to use the ointment, he ought, if he be of a full habit, to bleed or take a purge or two. It will likewise be proper, during the use of it, to take every night and morning as much of the flour of brimstone and cream of tartar, in a little treacle or new milk, as will keep the body gently open. I never knew brimstone, when used as directed above, fail to cure the itch; and I have reason to believe, that, if duly persisted in, it never will fail; but, if it be only used once or twice, and cleanliness neglected, it is no wonder if the disorder returns. The quantity of ointment mentioned above will generally be sufficient for the cure of one person; but, if any symptoms of the disease should appear again, the medicine may be repeated. It is both more safe and efficacious when persisted in for a considerable time, than when a large quantity is applied at once. As most people dislike the smell of sulphur, they must use, in its place, the powder of white hellebore root made up into an ointment, in the same manner, which will seldom fail to cure the itch. People ought to be extremely cautious lest they take other eruptions for the itch; as the stoppage of these may be attended with fatal consequences. Many of the eruptive disorders to which children are liable have a near resemblance to this disease; and I have often known infants killed by being rubbed with greasy ointments, that made these eruptions strike suddenly in, which nature had thrown out to preserve the patients life, or prevent some other malady.

OF THE ASTHMA.

THE asthma is a disease of the lungs, which seldom admits of a cure. Persons in the decline of life are most liable to it. It is distinguished into the moist and dry, or humoural and nervous. The former is attended with expectoration or spitting; but in the latter the patient seldom spits, unless sometimes a little tough phlegm by the mere force of coughing. An asthma is known by a quick laborious breathing, which is generally performed with a kind of wheezing noise. Sometimes the difficulty of breathing is so great, that the patient is obliged to keep in an erect posture, otherwise he is in danger of being suffocated. A fit or paroxysm of the asthma generally happens after a person has been exposed to cold easterly winds, or has been abroad in thick foggy weather, or has got wet, or continued long in a damp place under ground, &c.

CURE.---All windy food, and whatever is apt to swell in the stomach, is to be avoided. Strong liquors of all kinds, especially malt-liquor, are hurtful. The patient should eat a very light supper, or rather none at all, and should never suffer himself to be long coitive. His cloathing should be warm, especially in the winter-season. As all disorders of the breast are much relieved by keeping the feet warm, and promoting the perspiration, a flannel shirt or waistcoat, and thick shoes, will be of singular service. But nothing is of so great importance in the asthma as pure and moderately warm air. Many asthmatic persons, who cannot live in Britain, enjoy very good health in the south of France, Portugal, Spain, or Italy. Exercise is likewise of very great importance in the asthma, as it promotes the digestion, preparation of the blood, &c. The blood of asthmatic persons is seldom duly prepared, owing to the proper action of the lungs being impeded. For this reason such people ought daily to take as much exercise, either on foot, horseback, or in a carriage, as they can bear. Almost all that can be done by medicine in this disease, is to relieve the patient when seized with a violent fit. Bleeding, unless extreme weakness or old age should forbid it, is highly proper. If there be a violent spasm about the breast or stomach, warm fomentations, or bladders filled with warm milk and water, may be applied to the part affected, and warm cataplasms to the soles of the feet. The patient must drink freely of diluting liquors, and may take a tea-spoonful of the tincture of castor and of saffron mixed together, in a cup of valerian-tea, twice or thrice a-day. Sometimes a vomit has a very good effect, and snatches the patient, as it were, from the jaws of death. This however will be more safe after other evacuations have been premised. A very strong infusion of roasted coffee is said to give ease in an asthmatic paroxysm. In the moist asthma, such things as promote expectoration or spitting ought to be used; as the syrup of squills, gum ammoniac, and such like. A common spoonful of the
syrup

symp of oxymel of squills, mixed with an equal quantity of cinnamon-water, may be taken three or four times through the day ; and four or five pills, made of equal parts of asafœtida and gum-ammoniac, at bed-time. Large doses of æther have been found very efficacious in removing a fit of the asthma. For the convulsive or nervous asthma, antispasmodics and bracers are the most proper medicines. The patient may take a tea-spoonful of the paregoric elixir twice a-day. The Peruvian bark is sometimes found to be of use in this case. It may be taken in substance, or infused in wine. In short, every thing that braces the nerves, or takes off spasm, may be of use in a nervous asthma. It is often relieved by the use of asses milk ; I have likewise known cows milk drunk warm in the morning have a good effect in this case. In every species of asthmas, setons and issues are of great service ; they may either be put in the back or side, and should never be allowed to dry up. We shall here, once for all, observe, that not only in the asthma, but in most chronic diseases, issues are extremely proper. They are both a safe and efficacious remedy ; and, though they do not always cure the disease, yet they will often prolong the patient's life.

OF THE APOPLEXY.

THE immediate cause of an apoplexy is a compression of the brain, occasioned by an excess of blood, or a collection of watery humours. The former is called a *sanguine*, and the latter a *serous, apoplexy*. It may be occasioned by any thing that increases the circulation towards the brain, or prevents the return of the blood from the head ; intense study, violent passions, suppression of urine, excess of venery, the sudden striking in of any eruption, wounds or bruises on the head, long exposure to excessive cold, poisonous exhalations, &c.

CURE.---The usual forerunners of an apoplexy are giddiness, pain and swimming of the head, loss of memory, drowsiness, noise in the ears, the night-mare, a spontaneous flux of tears, and laborious respiration. When persons have reason to fear the approach of a fit, they should endeavour to prevent it by bleeding, a slender diet, and opening medicines. In the apoplexy, if the patient does not die suddenly, the countenance appears florid, the face is swelled or puffed up, and the blood-vessels, especially about the neck and temples, are turgid ; the pulse beats strong, the eyes are prominent and fixed, and the breathing is difficult, and performed with a snorting noise. The excrements and urine are often voided spontaneously, and the patient is sometimes seized with vomiting. In this stage, every method must be taken to lessen the force of the circulation towards the head. The garters should be tied pretty tight, by which means the motion of the blood from the lower extremities will be retarded. The patient should be bled freely in the neck or arm, and,
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if there be occasion, the operation may be repeated in two or three hours. A laxative clyster, with plenty of sweet oil, or fresh butter, and a spoonful or two of common salt in it, may be administered every two hours; and blistering plaisters applied betwixt the shoulders and to the calves of the legs. As soon as the symptoms are a little abated, and the patient is able to swallow, he ought to drink freely of some diluting opening liquor, as a decoction of tamarinds and liquorice, cream-tartar-whey, or common whey with cream of tartar dissolved in it. Or he may take any cooling purge, as Glauber's salts, manna dissolved in an infusion of senna, or the like. All spirits and other strong liquors are to be avoided. Even volatile salts held to the nose do mischief. Vomits, for the same reason, ought not to be given, nor any thing that may increase the motion of the blood toward the head. When apoplectic symptoms proceed from opium, or other narcotic substances taken into the stomach, vomits are necessary. The patient is generally relieved as soon as he has discharged the poison in this way.

OF THE HEART - BURN.

WHAT is commonly called the heart-burn is not a disease of that organ, but an uneasy sensation of heat or acrimony about the pit of the stomach, which is sometimes attended with anxiety, nausea, and vomiting. When the heart-burn proceeds from debility of the stomach or indigestion, the patient ought to take a dose or two of rhubarb; afterwards he may use infusions of the Peruvian bark, or any other of the stomachic bitters, in wine or brandy. Exercise in the open air will likewise be of use, and every thing that promotes digestion. When bilious humours occasion the heart burn, a tea-spoonful of the sweet spirit of nitre in a glass of water, or a cup of tea, will generally give ease. If it proceeds from the use of greasy aliments, a dram of brandy or rum may be taken. If acidity or sourness of the stomach occasions the heart-burn, absorbents are the proper medicines. In this case an ounce of powdered chalk, half an ounce of fine sugar, and a quarter of an ounce of gum-arabic, may be mixed in an English quart of water, and a tea-cupful of it taken as often as is necessary. But the safest and best absorbent is magnesia alba. This not only acts as an absorbent, but likewise as a purgative; whereas chalk, and other absorbents of that kind, are apt to lie in the intestines, and occasion obstructions. If wind be the cause of this complaint, the most proper medicines are those called carminatives; as anniseeds, juniper-berries, ginger, canella alba, cardamom seeds, &c. These may either be chewed, or infused in wine, brandy, or other spirits. I have frequently known the heart-burn cured, particularly in pregnant women, by chewing green tea.

OF NERVOUS DISEASES.

NERVOUS diseases not only affect the body, but the mind likewise suffers, and is often thereby rendered extremely weak and peevish. The low spirits, timorousness, melancholy, and fickleness of temper, which generally attend nervous disorders, induce many to believe, that they are entirely diseases of the mind; but this change of temper is rather a consequence, than the cause, of the disease. Every thing that tends to relax or weaken the body disposes it to nervous diseases, as indolence, excessive venery, drinking too much tea, or other weak watery liquors, frequent bleeding, purging, vomiting, &c.

CURE.---Persons afflicted with nervous diseases ought never to fast long. Their food should be solid and nourishing, but of easy digestion. Fat meats, and heavy fauces, are hurtful. All excess should be carefully avoided. They ought never to eat more at a time than they can easily digest; but, if they feel themselves weak and faint between meals, they ought to eat a bit of bread, and drink a glass of wine. Heavy suppers are to be avoided. Though wine in excess enfeebles the body, and impairs the faculties of the mind, yet, taken in moderation, it strengthens the stomach, and promotes digestion. Exercise in nervous disorders is superior to all medicines. Even change of place, and the sight of new objects, by diverting the mind, have a great tendency to remove these complaints. For this reason a long journey, or a voyage, is of much more advantage than riding short journeys near home. Though nervous diseases are seldom radically cured, yet their symptoms may sometimes be alleviated, and the patient's life rendered, at least, more comfortable, by proper medicines. When digestion is bad, or the stomach relaxed and weak, the following infusion of Peruvian bark and other bitters may be used with advantage. Take of Peruvian bark an ounce, gentian-root, orange-peel, and coriander-seed, of each half an ounce; let these ingredients be all bruised in a mortar, and infused in a bottle of brandy or whiskey for the space of five or six days. A table-spoonful of the strained liquor may be taken in half a glass of water, an hour before breakfast, dinner, and supper. Few things tend more to strengthen the nervous system than cold bathing. This practice, if duly persisted in, will produce very extraordinary effects; but, when the liver or other viscera are obstructed, or otherwise unsound, the cold bath is improper. It is therefore to be used with very great caution. The most proper seasons for it are summer and autumn. It will be sufficient for persons of a spare habit, to go into the cold bath three or four times a week. If the patient be weakened by it, or feels chilly for a long time after coming out, it is improper. Opiates are generally extolled in these maladies; but, as they only palliate the symptoms, and generally afterwards increase the disease, we would advise people to be extremely sparing in the

the use of them, left habit render them at last absolutely necessary. Whoever wishes for a thorough cure of this disease, should pay the strictest attention to diet, air, exercise, and amusement.

OF THE PALSY.

THE palsy is a loss or diminution of sense or motion, or of both, in one or more parts of the body. Of all the affections called nervous, this is the most suddenly fatal. The immediate cause of palsy is any thing that prevents the regular exertion of the nervous power upon any particular muscle or part of the body. The occasional and predisposing causes are various, as drunkenness, wounds of the brain or spinal marrow, pressure upon the brain or nerves, very cold or damp air, the suppression of customary evacuations, sudden fear, want of exercise, or whatever greatly relaxes the system.

CURE.---In young persons of a full habit, the palsy must be treated in the same manner as the apoplexy. The patient must be bled, blistered, and have his body opened by sharp clysters or purgative medicines. But, in old age, or when the disease proceeds from relaxation or debility, which is generally the case, a quite contrary course must be pursued. The diet must be warm and invigorating, seasoned with spicy and aromatic vegetables, as mustard, horse-raddish, &c. The drink may be generous wine, mustard, whey, or brandy and water. Friction with the flesh-brush, or a warm hand, is extremely proper, especially on the parts affected. Blisters may likewise be applied to the affected parts with advantage. One of the best external applications is electricity. The shocks should be received on the part affected; and they ought daily to be repeated for several weeks. Vomits are very beneficial in this kind of palsy, and ought frequently to be administered. The wild valerian-root is a very proper medicine in this case. It may either be taken in an infusion with sage-leaves, or half a drachm of it in powder may be given in a glass of wine three times a-day. If the patient cannot use the valerian, he may take of *sal volatile oleosum*, compound spirits of lavender, and tincture of castor, each half an ounce; mix these together, and take forty or fifty drops in a glass of wine, three or four times a-day. A table-spoonful of mustard-seed taken frequently, is a very good medicine. The patient ought likewise to chew cinnamon-bark, ginger, or other warm spices. Exercise is of the utmost importance in the palsy; but the patient must beware of cold, damp, and moist, air. He ought to wear flannel next his skin; and, if possible, should remove into a warmer climate.

OF THE EPILEPSY, OR FALLING SICKNESS.

THE epilepsy is a sudden deprivation of all the senses, wherein the patient falls suddenly down, and is affected with violent convulsive motions. It is sometimes hereditary.

hereditary. It may likewise proceed from frights of the mother when with child; from blows, bruises, or wounds, on the head; a collection of water, blood, or serous humours, in the brain; a polypus, tumours, or concretions within the skull; excessive drinking, intense study, excess of venery, worms, teething, suppression of customary evacuations, too great emptiness or repletion; violent passions or affections of the mind, as fear, joy, &c. hysterical affections, contagion received into the body, as the infection of the small-pox, measles, &c. In an epileptic fit, the patient generally makes an unusual noise; his thumbs are drawn in towards the palms of the hands, his eyes are distorted, he starts and foams at the mouth, his extremities are bent or twisted various ways, he often discharges his seed, urine, and fæces, involuntarily, and is quite destitute of all sense and reason. After the fit is over, his senses gradually return, and he complains of a kind of stupor, weariness, and pain of his head; but has no remembrance of what happened to him during the fit.

CURE.---If the patient be of a sanguine temperament, and there be reason to fear an obstruction in the brain, bleeding and other evacuations will be necessary. When the disease is occasioned by the stoppage of customary evacuations, these, if possible, must be restored; if this cannot be done, others may be substituted in their place. Issues or setons, in this case, have often a very good effect. When there is reason to believe that the disease proceeds from worms, proper medicines must be used to kill, or carry off, these vermin. When the disease proceeds from teething, the body should be kept open by emollient clysters, the feet frequently bathed in warm water, and, if the fits prove obstinate, a blister may be put betwixt the shoulders. The same method is to be followed, when epileptic fits precede the eruption of the small-pox, or measles, &c. The flowers of zinc have of late been highly extolled for the cure of the epilepsy. Though this medicine will not be found to answer the expectations which have been raised concerning it, yet in obstinate epileptic cases it deserves a trial. The dose is from one to three or four grains, which may be taken either in pills, or a bolus, as the patient inclines. The best method is to begin with a single grain four or five times a-day, and gradually to increase the dose as far as the patient can bear it. Musk has sometimes been found to succeed in the epilepsy. Ten or twelve grains of it, with the same quantity of saccharine cinnamon, may be made up into a bolus, and taken every night and morning. Sometimes the epilepsy has been cured by electricity. Convulsion fits proceed from the same causes, and must be treated in the same manner, as the epilepsy.

OF THE HICCUP.

THE hiccup is a spasmodic or convulsive affection of the stomach and midriff, arising from any cause that irritates their nervous fibres.

CURE.

CURE.---When the hiccup proves very obstinate, recourse must be had to the most powerful aromatic and antispasmodic medicines. The principal of these is musk; fifteen or twenty grains of which may be made into a bolus, and repeated occasionally. Opiates are likewise of service; but they must be used with caution. A bit of sugar dipped in compound spirits of lavender, or the volatile aromatic tincture, may be taken frequently. External applications are sometimes also beneficial; as the stomach plaister, or a cataplasm of the Venice treacle, applied to the region of the stomach.

C R A M P O F T H E S T O M A C H .

THIS disease often seizes people suddenly, is very dangerous, and requires immediate assistance. It is most incident to persons in the decline of life, especially the nervous, gouty, hystéric, and hypochondriac.

CURE.---Let the stomach be fomented with cloths dipped in warm water; or bladders filled with warm milk and water constantly applied to it. These often produce the most happy effects. In very violent and lasting pains of the stomach, some blood ought to be let, unless the weakness of the patient forbids it. When the pain or cramps proceed from a suppression of the menses, bleeding is of use. If they be owing to the gout, recourse must be had to spirits, or some of the warm cordial waters. Blisters ought likewise, in this case, to be applied to the ancles. Violent cramps and pains of the stomach are often removed by covering it with a large plaister of Venice treacle.

O F T H E N I G H T - M A R E .

IN this disease the patient, in time of sleep, imagines he feels an uncommon oppression or weight about his breast or stomach, which he can by no means shake off. He groans, and sometimes cries out, though oftener he attempts to speak in vain. Sometimes he imagines himself engaged with an enemy, and in danger of being killed, attempts to run away, but finds he cannot. Sometimes he fancies himself in a house that is on fire, or that he is in danger of being drowned in a river. He often thinks he is falling over a precipice, and the dread of being dashed to pieces suddenly awakes him. This disorder has been supposed to proceed from too much blood; from a stagnation of blood in the brain, lungs, &c. But it is rather a nervous affection, and arises chiefly from indigestion. Hence we find that persons of weak nerves, who lead a sedentary life, and live full, are most commonly afflicted with the night-mare. Nothing tends more to produce it than heavy suppers, especially when eaten late, or the patient goes to bed soon after.

CURE.---As persons afflicted with the night-mare generally moan or make some noise in the fit, they should be waked or spoken to by such as hear them, as the uneasiness generally goes off as soon as the patient is awake, or any one limb removed; but there is oftentimes an universal lassitude of the whole body left behind, which remains for some space of time. Some say a dram of brandy, taken at bed-time, will prevent this disease. That, however, is a bad custom, and, in time, loses its effect. We would rather have the patient depend upon the use of food of easy digestion, cheerfulness, exercise through the day, and a light supper taken early, than to accustom himself to drams. A glass of peppermint-water will often promote digestion as much as a glass of brandy, and is much safer. After a person of weak digestion, however, has eaten flatulent food, a dram may be necessary; in this case we would recommend it as the most proper medicine. Persons who are young, and full of blood, if troubled with the night-mare, ought to take a purge frequently, and use a spare diet.

The night-mare was supposed by the ancients not to be any real disorder of the body, but to be an effect, or sensation, derived from carnal contact in the night with some evil spirit or dæmon during the hours of sleep. They contended, that persons of a lustful inclination, who, during the day, indulged in strong desires of copulation, and had dreams answerable thereto in the night, were frequently visited by these evil spirits, whose business it was to watch for favourable opportunities of seducing the mind, already half alienated from virtue and chastity, to the most lascivious imaginations, the better to compleat their purpose of carnal indulgence and delight. When the weight and oppression on the breast and stomach produced by this disorder happened to females, it was called *incubus*, or a *male* monster; and, when to males, it was called *succubus*, or a *female* dæmon, which had contact with the man, similar to the male monster with the woman; and the lassitude and fatigue left on the body by the disease were supposed to be the natural effect of this abominable copulation. Absurd as was the doctrine, whole volumes have been written upon it; and in former days it opened a large field for priest-craft and seduction of poor ignorant unsuspecting girls. How many reasons have we to be thankful for the lights of the gospel dispensed in our own tongue, and for the illuminations of the present æra!

OF FLATULENCIES, OR WIND:

ALL nervous patients, without exception, are afflicted with wind or flatulencies in the stomach and bowels, which arise chiefly from the want of tone or vigour in these organs. Crude flatulent aliment, as green peas, beans, coleworts, cabbages, and such like, may increase this complaint; but strong and healthy people are seldom

dom troubled with wind, unless they either overload their stomachs, or drink liquors that are in a fermenting state, and consequently full of elastic air. While therefore the matter of flatulence proceeds from our aliments, the cause which makes air separate from them in such quantity as to occasion complaints is almost always a fault of the bowels themselves, which are too weak either to prevent the production of elastic air, or to expel it after it is produced.

CURE.---To relieve this complaint, such medicines ought to be used as have a tendency to expel wind, and, by strengthening the alimentary canal, to prevent its being produced there. The list of medicines for expelling wind is very numerous; they often however disappoint the expectations of both the physician and his patient. The most celebrated among the class of carminatives are juniper-berries; the roots of ginger and zedoary; the seeds of anise, caraway, and coriander; gum asafoetida and opium; the warm waters, tinctures, and spirits, aromatic water, tincture of woodfoot, volatile aromatic spirit, æther, &c. For strengthening the stomach and bowels, and consequently for lessening the production of flatulence, the Peruvian bark, bitters, chalybeates, and exercise, are the best remedies.

OF HYSTERIC COMPLAINTS.

THESE belong to the numerous tribe of nervous diseases, which may be justly reckoned the reproach of medicine. Women of a delicate habit, whose stomach and intestines are relaxed, and whose nervous system is extremely sensible, are most subject to hysteric complaints. In such persons an hysteric fit, as it is called, may be brought on by an irritation of the nerves of the stomach or intestines, by wind, acrid humour, or the like. A sudden suppression of the menses often gives rise to hysteric fits. They may likewise be excited by violent passions or affections of the mind, as fear, grief, anger, or great disappointments.

CURE.---The radical cure of this disorder will be best attempted at a time when the patient is most free from the fits. It will be greatly promoted by a proper attention to regimen. A milk and vegetable diet, duly persisted in, will often perform a cure. If, however, the patient has been accustomed to a more generous diet, it will not be safe to leave it off all at once, but by degrees. The most proper drink is water with a small quantity of spirits. A cool dry air is the best. Cold bathing, and every thing that braces the nerves, and invigorates the system, is beneficial; but lying too long in bed, or whatever relaxes the body, is hurtful. It is of the greatest importance to have the mind kept constantly easy and cheerful, and, if possible, to have it always engaged in some agreeable and interesting pursuit. The proper medicines are those which strengthen the alimentary canal and the whole nervous system, as the preparations of iron, the Peruvian bark, and other bitters.

Twenty drops of the elixir of vitriol, in a cup of the infusion of the bark, may be taken twice or thrice-a-day. The chalybeate waters generally prove beneficial in this disorder. Hysterical women are often afflicted with cramps in various parts of the body, which are most apt to seize them in bed, or when asleep. The most efficacious medicines in this case are opium, blistering-plasters, and warm bathing or fomentations. When the cramp or spasm is very violent, opium is the remedy most to be depended on. Cramps are often prevented or cured by compression. Thus cramps in the legs are prevented, and sometimes removed, by tight bandages; and, when convulsions arise from a flatulent distension of the intestines, or from spasms beginning in them, they may be often lessened or cured by making a pretty strong compression upon the abdomen by means of a broad belt. A roll of brimstone held in the hand is frequently used as a remedy for cramps: though this seems to owe its effect chiefly to imagination, yet, as it sometimes succeeds, it merits a trial. When spasms or convulsive motions arise from sharp humours in the stomach and intestines, no lasting relief can be procured till these are either corrected or expelled. The Peruvian bark has sometimes cured periodic convulsions after other medicines have failed.

OF HYPOCHONDRIAC COMPLAINTS.

THESE generally attack the indolent, the luxurious, the unfortunate, and the studious; and are daily increased by luxury and sedentary employments. Men of a melancholy temperament, whose minds are capable of great attention, and whose passions are not easily moved, are, in the advanced periods of life, most liable to this disease. It is usually brought on by long and serious attention to abstruse subjects, grief, the suppression of customary evacuations, excess of venery, the repulsion of cutaneous eruptions, long-continued evacuations, obstructions in some of the viscera, as the liver, spleen, &c.

CURE.---Cheerfulness and serenity of mind are by all means to be cultivated. Exercise of every kind is useful. The cold bath is likewise beneficial; and, where it does not agree with the patient, frictions with the flesh-brush or a coarse cloth may be tried. If the patient has it in his power, he ought to travel either by sea or land. A voyage or a long journey, especially towards a warmer climate, will be of more service than any medicine. The general intentions of cure, in this disease, are to strengthen the alimentary canal, and to promote the secretions. These intentions will be best answered by the different preparations of iron and the Peruvian bark, which, after proper evacuations, may be taken in the same manner as directed in the preceding disease.

OF A SCIRRHUS AND CANCER.

A SCIRRHUS is a hard indolent tumour seated in some of the glands, as the breasts, the arm-pits, &c. If the tumour becomes large, unequal, of a livid, blackish, or leaden, colour, and is attended with violent pain, it gets the name of an *occult cancer*. When the skin is broken, and a *sanies* or ichorous matter of an abominably foetid smell is discharged from the sore, it is called an open or ulcerated cancer. Persons after the age of forty-five, particularly women, and those who lead an indolent sedentary life, are most subject to this disease. A cancer is often owing to suppressed evacuations; hence it proves so frequently fatal to women of a gross habit, particularly old maids and widows, about the time when the menstrual flux ceases. It may also be occasioned by the long-continued use of food that is too hard of digestion, or of an acrid nature; by barrenness, celibacy, indolence, cold, blows, friction, pressure, or the like. Women often suffer from the last of these by means of their stays, which squeeze and compress their breasts so as to occasion great mischief. This disorder seems often very trifling at the beginning. A hard tumour about the size of a hazle-nut, or perhaps smaller, is generally the first symptom. This will often continue for a long time without seeming to increase, or giving the patient great uneasiness; but, if the constitution be hurt, or the tumour irritated by pressure, or improper treatment of any kind, it begins to extend itself towards the neighbouring parts, by pushing out a kind of roots or limbs. It then gets the name of *cancer*, from a fancied resemblance between these limbs and the claws of a crab. The colour of the skin begins to change, which is first red, afterwards purple, then bluish, livid, and at last black. The patient complains of heat, with a burning, gnawing, shooting, pain. The tumour is very hard, rough, and unequal, with a protuberance, or rising, in the middle; its size increases daily, and the neighbouring veins become thick, knotty, and of a blackish colour. The skin at length gives way, and a thin sharp ichor begins to flow, which corrodes the neighbouring parts till it forms a large unsightly ulcer. More occult cancers arise, and communicate with the neighbouring glands. The pain and stench become intolerable; the appetite fails; the strength is exhausted by a continual hectic fever; at last, a violent hæmorrhage, or discharge of blood, from some part of the body, with faintings, or convulsion fits, generally put an end to the miserable patient's life.

CURE.---This is one of those diseases for which no certain remedy is yet known. Its progress however may sometimes be retarded, and some of its most disagreeable symptoms mitigated, by proper applications. One misfortune attending the disease is, that the unhappy patient often conceals it too long. Were proper means used in

due time, a cancer might often be cured ; but, after the disorder has arrived at a certain height, it generally sets all medicine at defiance. When a scirrhus tumour is first discovered, the patient ought to observe a proper regimen, and to take twice or thrice a-week a dose of the common purging mercurial pill. Some blood may also be let, and the part affected may be gently rubbed twice a-day with a little of the mercurial ointment, and kept warm with fur or flannel. The food must be light, and an English pint of the decoction of sarsaparilla may be drunk daily. Should the tumour not yield to this treatment, but, on the contrary, become larger and harder, it will be proper to extirpate it, either by the knife or caustic. Indeed, whenever this can be done with safety, the sooner it is done the better. It can answer no purpose to extirpate a cancer after the constitution is ruined, or the whole mass of humours corrupted, by it. This however is the common way, which makes the operation so seldom succeed. Few people will submit to the extirpation till death stares them in the face ; whereas, if it were done early, the patient's life would not be endangered by the operation, and it would generally prove a radical cure. The medicine most in repute for this disease is hemlock. Dr. Stork, physician at Vienna, has of late recommended the extract of this plant as very efficacious in cancers of every kind. The Doctor says, he has given some hundred-weights of it without ever hurting any body, and often with manifest advantage. He advises the patient however to begin with very small doses, as two or three grains, and to increase the dose gradually till some good effect be perceived, and there to rest without further increase. From two or three grains at first, the Doctor says he has increased the dose to two, three, or four, drachms a-day, and finds that such doses may be continued for several weeks without any bad consequences. The Doctor does not pretend to fix the time in which a cancer may be resolved by the use of hemlock, but says he has given it for above two years in large doses without any apparent benefit ; nevertheless the patient has been cured by persisting in the use of it for half a year longer. This is at least encouragement to give it a fair trial. The powder of hemlock is by some preferred to the extract. They are both made of the fresh leaves, and may be used nearly in the same manner. Dr. Nicholson, of Berwick, says, he gradually increased the dose of the powder from a few grains to half a drachm, and gave near four drachms of it in the day with remarkably good effects. The hemlock may also be used externally either as a poultice or fomentation. The sore may likewise be kept clean by injecting daily a strong decoction of the tops and leaves into it. Few things contribute more to the healing of foul fordid ulcers of any kind than keeping them thoroughly clean. This ought never to be neglected. The best application for this purpose seems to be the carrot poultice. The root of the common carrot may be grated, and moistened with as much water as will bring it to the consistence.

confidence of a poultice or cataplasm. This must be applied to the sore, and renewed twice a-day. It generally cleans the sore, eases the pain, and takes away the disagreeable smell, which are objects of no small importance in such a dreadful disorder. Wort, or an infusion of malt, has been recommended not only as a proper drink, but as a powerful medicine, in this disease. It must be frequently made fresh, and the patient may take it at pleasure. Two, three, or even four, English pints of it may be drunk every day for a considerable time. No benefit can be expected from any medicine, in this disease, unless it be persisted in for a long time. It is of too obstinate a nature to be soon removed; and, when it admits of a cure at all, it must be brought about by inducing an almost total change of the habit, which must always be a work of time. Setons or issues in the neighbourhood of the cancer have sometimes good effects. When all other medicines fail, recourse must be had to opium, as a kind of solace. This will not indeed cure the disease, but it will ease the patient's agony, and render life more tolerable while it continues. To avoid this dreadful disorder, people ought to use wholesome food, to take sufficient exercise in the open air, and carefully to guard against all blows, bruises, and every kind of pressure upon the breasts or other glandular parts.

OF POISONS.

EVERY person ought, in some measure, to be acquainted with the nature and cure of poisons. They are generally taken unawares, and their effects are often so sudden and violent, as not to admit of delay, or allow time to procure the assistance of physicians. Happily indeed no great degree of medical knowledge is here necessary; the remedies for most poisons being generally at hand, or easily obtained, and nothing but common prudence needful in the application of them. The cure of all poisons taken into the stomach, without exception, depends chiefly on discharging them as soon as possible. For this purpose the patient should drink large quantities of new milk and salad-oil till he vomits; or he may drink warm water mixed with oil. Fat broths are likewise proper, provided they can be got ready in time. Where no oil is to be had, fresh butter may be melted and mixed with the milk or water. These things are to be drunk as long as the inclination to vomit continues. Some have drunk eight or ten quarts before the vomiting ceased; and it is never safe to leave off drinking while one particle of the poison remains in the stomach. These oily or fat substances not only provoke vomiting, but likewise blunt the acrimony of mineral poison, and prevent its wounding the bowels; but, if they should not make the person vomit, half a drachm or two scruples of the powder of ipecacuanha must be given, or a few spoonfuls of the oxymel or vinegar of squills may be mixed with the water which he drinks. Vomiting may likewise
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be excited by tickling the inside of the throat with a feather. Should these methods however fail, half a drachm of white vitriol, or five or six grains of emetic tartar, must be administered. If tormenting pains are felt in the lower belly, and there is reason to fear that the poison has got down to the intestines, clysters of milk and oil must be very frequently thrown up; and the patient must drink emollient decoctions of barley, oatmeal, marsh-mallows, and such-like. He must likewise take an infusion of fenna and manna, a solution of Glauber's salts, or some other purgative: After the poison has been evacuated, the patient ought, for some time, to live upon such things as are of a healing and cooling quality; to abstain from flesh and all strong liquors, and to live upon milk, broth, gruel, light puddings, and other spoon-meats of easy digestion. His drink should be barley-water, linseed-tea, or infusions of any of the mild mucilaginous vegetables. Though vegetable poisons, when allowed to remain in the stomach, often prove fatal; yet the danger is generally over as soon as they are discharged. Not being of such a caustic or corrosive nature, they are less apt to wound or inflame the bowels than mineral substances; no time however, ought to be lost in having them discharged. For the bites of poisonous animals, a great variety of certain and immediate cures are pointed out in the Herbal. For the bite of a viper, however, the wound should be well sucked, and afterwards rubbed with warm sallad-oil. A poultice of bread and milk, softened with sallad-oil, should likewise be applied to the wound; and the patient ought to drink freely of vinegar-whey, or water-gruel with vinegar in it, to make him sweat. Vinegar is one of the best drinks which can be used in any kind of poison, and ought to be taken very liberally. If the patient be sick, he may take a vomit. This course will be sufficient to cure the bite of any of the poisonous animals of this country. It is the happiness of this island to have very few poisonous animals, and those which we have are by no means of the most virulent kind. We cannot however make the same observation with regard to poisonous vegetables. These abound every where, and prove often fatal to the ignorant and unwary. This indeed is chiefly owing to carelessness. Children ought early to be cautioned against eating any kind of fruit, roots, or berries, which they do not know; and all poisonous plants to which they can have access, ought, as far as possible, to be destroyed. This would not be so difficult a task as some people imagine, were this Herbal kept in all families, and their children made to read lessons from it, as an easy occasional task. This, I think, will appear an indispensable duty in parents, when we reflect, that seldom a year passes but we have accounts of several persons poisoned by eating hemlock-roots instead of parsnips, or some kinds of fungus which they had gathered for mushrooms. These examples ought to put people upon their guard with respect to the former, and to put the latter entirely out of use. We might here

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mention many other plants and animals of a poisonous nature which are found in foreign countries; but, as our observations are chiefly intended for this island, we shall pass these over. It may not however be amiss to observe, for the behoof of such of our countrymen as go to America, that an effectual remedy is now said to be found for the bite of the rattle-snake.---The prescription is as follows: Take of the roots of plantain and horehound, in summer, roots and branches together, a sufficient quantity; bruise them in a mortar, and squeeze out the juice, of which give, as soon as possible, one large spoonful; if the patient be swelled, you must force it down his throat. This generally will cure; but, if he finds no relief in an hour after, you may give another spoonful, which never fails.---If the roots are dried, they must be moistened with a little water. To the wound may be applied a leaf of good tobacco moistened with rum. We give this upon the faith of Dr. Brookes, who says it was the invention of a negro; for the discovery of which he had his freedom purchased, and a hundred pounds per annum settled upon him during life, by the General Assembly of Carolina.

OF INFLAMMATIONS AND ABSCESSSES.

FROM whatever cause an inflammation proceeds, it must terminate either by dispersion, suppuration, or gangrene. Though it is impossible to foretel with certainty in which of these ways any particular inflammation will terminate, yet a probable conjecture may be formed with regard to the event, from a knowledge of the patient's age and constitution. Inflammations happening in a slight degree upon colds, and without any previous indisposition, will most probably be dispersed; those which follow close upon a fever, or happen to persons of a gross habit of body, will generally suppurate; and those which attack very old people, or persons of a dropical habit, will have a strong tendency to gangrene.

CURE---If the inflammation be slight, and the constitution sound, the dispersion ought always to be attempted. This will be best promoted by a slender diluting diet, plentiful bleeding, and repeated purges. The part itself must be fomented, and, if the skin be very tense, it may be embrocated with a mixture of three-fourths of sweet oil, and one-fourth of vinegar, and afterwards covered with a piece of wax plaister. If, notwithstanding these applications, the symptomatic fever increases, and the tumour becomes larger, with violent pain and pulsation, it will be proper to promoted the suppuration. The best application for this purpose is a soft poultice, which may be renewed twice a-day. If the suppuration proceeds but slowly, a raw onion cut small or bruised may be spread upon the poultice. When the abscess is ripe or fit for opening, which may easily be known from the thinness of the skin in the most prominent part of it, a fluctuation of matter which

may be felt under the finger, and, generally speaking, an abatement of the pain, it may be opened either with a lancet or by means of caustic. The last way in which an inflammation terminates is in a gangrene or mortification, the approach of which may be known by the following symptoms: The inflammation loses its redness, and becomes dusky or livid; the tension of the skin goes off, and it feels flabby; little bladders filled with ichor of different colours spread all over it; the tumour subsides, and from a dusky complexion becomes black; a quick low pulse, with cold clammy sweats, are the immediate forerunners of death. When these symptoms first appear, the part ought to be dressed with London treacle, or a cataplasm, made of lixivium and bran; should the symptoms become worse, the part must be scarified, and afterwards dressed with basilicum softened with oil of turpentine. All the dressings must be applied warm. With regard to internal medicines, the patient must be supported with generous cordials, and the Peruvian bark exhibited in as large doses as the stomach will bear it. If the mortified parts should separate, the wound will become a common ulcer, and must be treated accordingly. This article includes the treatment of all those diseases, which, in different parts of the country, go by the names of biles, imposthumes, whitloes, &c. They are all abscesses in consequence of a previous inflammation, which, if possible, ought to be discussed, but, when this cannot be done, the suppuration should be promoted, and the matter discharged by an incision, if necessary; afterwards the sore may be dressed with yellow basilicum, or some other digestive ointment.

OF WOUNDS.

NO part of medicine has been more mistaken than the treatment or cure of wounds. It is however a fact, that no external application whatever contributes towards the cure of a wound, any other way than by keeping the parts soft, clean, and defending them from the external air, which may be as effectually done by dry lint as by the most pompous applications, while it is exempt from many of the bad consequences attending them. The same observation holds with respect to internal applications. These only promote the cure of wounds as far as they tend to prevent a fever, or to remove any cause that might obstruct or impede the operations of nature. It is nature alone that cures wounds; all that art can do is to remove obstacles, and to put the parts in such a condition as is the most favourable to nature's efforts.

CURE.---The first thing to be done, when a person has received a wound, is to examine whether any foreign body be lodged in it, as wood, stone, iron, lead, glass, dirt, bits of cloth, or the like. These, if possible, ought to be extracted, and the wound cleaned, before any dressings be applied. When that cannot be effected
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with safety, on account of the patient's weakness, or loss of blood, they must be suffered to remain in the wound, and afterwards extracted when he is more able to bear it. When a wound penetrates into any of the cavities of the body, as the breast, the bowels, &c. or where any considerable blood-vessel is cut, a skilful surgeon ought immediately to be called, otherwise the patient may lose his life. But sometimes the discharge of blood is so great, that, if it be not stopped, the patient may die, even before a surgeon, though at no great distance, can arrive. In this case, something must be done by those who are present. If the wound be in any of the limbs, the bleeding may generally be stopped by applying a tight ligature or bandage round the member a little above the wound. In parts where this bandage cannot be applied, various other methods may be tried to stop the bleeding, as the application of styptics, astringents, &c. Cloths dipped in a solution of blue vitriol in water, or the styptic water of the dispensatories, may be applied to the wound. When these cannot be obtained, strong spirits of wine may be used. Some recommend the agaric of the oak as preferable to any of the other styptics; and indeed it deserves considerable encomiums. It is easily obtained, and ought to be kept in every family, in case of accidents. A piece of it must be laid upon the wound, and covered with a good deal of lint, above which a bandage may be applied so tight as to keep it firmly on. Though spirits, tinctures, and hot balsams, may be used, in order to stop the bleeding when it is excessive, they are improper at other times. They do not promote but retard the cure, and often change a simple wound into an ulcer. People imagine, because hot balsams congeal the blood, and seem, as it were, to fold up the wound, that they therefore heal it; but this is only a deception. They may indeed stop the flowing blood, by searing the mouths of the vessels; but, by rendering the parts callous, they obstruct the cure. When a wound is greatly inflamed, the most proper application is a poultice of bread and milk, softened with a little sweet oil or fresh butter. This must be applied instead of a plaister, and should be changed twice a-day. If the wound be large, and there is reason to fear an inflammation, the patient should be kept on a very low diet. He must abstain from flesh, strong liquors, and every thing that is of a heating nature. If he be of a full habit, and has lost but little blood from the wound, he must be bled; and, if the symptoms be urgent, the operation may be repeated. But, when the patient has been greatly weakened by loss of blood from the wound, it will be dangerous to bleed him even though a fever should ensue. Nature should never be too far exhausted: it is always more safe to allow her to struggle with the disease in her own way than to sink the patient's strength by excessive evacuations.

OF BURNS.

IN slight burns which do not break the skin, it is customary to hold the part near the fire for a competent time, to rub it with salt, or to lay a compress upon it dipped in spirits of wine or brandy. But, when the burn has penetrated so deep as to blister or break the skin, it must be dressed with some of the liniments for burns, or with the emollient and gently drying ointment, commonly called Turner's cerate. This may be mixed with an equal quantity of fresh olive oil, and spread upon a soft rag, and applied to the part affected. When this ointment cannot be had, an egg may be beat up with about an equal quantity of the sweetest salad oil. This will serve very well till a proper ointment can be prepared. When the burning is very deep, after the first two or three days, it should be dressed with equal parts of yellow basilicum and Turner's cerate mixed together. When the burn is violent, or has occasioned a high degree of inflammation, and there is reason to fear a gangrene or mortification, the same means must be used to prevent it as are recommended in other violent inflammations. The patient, in this case, must live low, and drink freely of weak diluting liquors. He must likewise be bled, and have his body kept open. But, if the burnt parts should become livid or black, with other symptoms of mortification, it will be necessary to bathe them frequently with warm camphorated spirits of wine, tincture of myrrh, or other antiseptics, mixed with a decoction of the bark. In this case the bark must likewise be taken internally, and the patient's diet must be more generous.

OF BRUISES.

IN slight bruises it will be sufficient to bathe the part with warm vinegar, to which a little brandy or rum may occasionally be added, and to keep cloths wet with this mixture constantly applied to it. This is more proper than rubbing it with brandy, spirits of wine, or other ardent spirits, which are commonly used in such cases. In some parts of the country the peasants apply to a recent bruise a cataplasm of fresh cow-dung. I have often seen this cataplasm applied to violent contusions occasioned by blows, falls, bruises, and such like, and never knew it fail to have a good effect. When a bruise is very violent, the patient ought immediately to be bled, and put upon a proper regimen. His food should be light and cool, and his drink weak, and of an opening nature; as whey sweetened with honey, decoctions of tamarinds, barley, cream-tartar-whey, and such-like. The bruised part must be bathed with vinegar and water, as directed above; and a poultice made by boiling crumb of bread, elder-flowers, and camomile-flowers, in equal quantities of vinegar and water, applied to it. This poultice is peculiarly proper

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when a wound is joined to the bruise. It may be renewed two or three times a-day. As the structure of the vessels is totally destroyed by a violent bruise, there often ensues a great loss of substance, which produces an ulcerous sore very difficult to cure. If the bone be affected, the sore will not heal before an exfoliation takes place; that is, before the diseased part of the bone separates, and comes out through the wound. This is often a very slow operation, and may even require several years to be completed. Hence it happens, that these sores are frequently mistaken for the king's evil, and treated as such, though, in fact, they proceed solely from the injury which the solid parts received from the blow. Patients in this situation are pestered with different advices. Every one who sees them proposes a new remedy, till the sore is so much irritated with various and opposite applications, that it is often at length rendered absolutely incurable. The best method of managing such sores is, to take care that the patient's constitution does not suffer by confinement, or improper medicine, and to apply nothing to them but some simple ointment spread upon soft lint, over which a poultice of bread and milk, with boiled camomile-flowers, or the like, may be put, to nourish the part, and keep it soft and warm. Nature, thus assisted, will generally in time operate a cure, by throwing off the diseased parts of the bone, after which the sore soon heals.

OF ULCERS.

ULCERS may be the consequence of wounds, bruises, or imposthumes, improperly treated; they may likewise proceed from an ill state of the humours, or what may be called a bad habit of body. In the latter case, they ought not to be hastily dried up, otherwise it may prove fatal to the patient. Ulcers happen most commonly in the decline of life; and persons who neglect exercise, and live grossly, are most liable to them. They might often be prevented by retrenching some part of the solid food, or by opening artificial drains, as issues, setons, or the like. It requires considerable skill to be able to judge whether or not an ulcer ought to be dried up. In general, all ulcers which proceed from a bad habit of body should be suffered to continue open, at least till the constitution has been so far changed by proper regimen, or the use of medicine, that they seem disposed to heal of their own accord. Ulcers which are the effect of malignant fevers, or other acute diseases, may generally be healed with safety after the health has been restored for some time. The cure ought not, however, to be attempted too soon, nor at any time without the use of purging medicines and a proper regimen. When wounds or bruises have, by wrong treatment, degenerated into ulcers, if the constitution be good, they may generally be healed with safety. When ulcers either accompany chronical diseases, or come in their stead, they must be cautiously healed. If an ulcer conduces to the

patient's health, from whatever cause it proceeds, it ought not to be healed; but if, on the contrary, it wastes the strength, and consumes the patient by a slow fever, it should be healed as soon as possible. We would earnestly recommend a strict attention to these particulars, to all who have the misfortune to labour under this disorder, particularly persons in the decline of life; as we have frequently known people throw away their lives by the want of it, while they were extolling and generously rewarding those whom they ought to have looked upon as their executioners. The most proper regimen for promoting the cure of ulcers, is to avoid all spices, salted and high-seasoned food, all strong liquors, and to lessen the usual quantity of flesh meat. The body ought to be kept gently open by a diet consisting chiefly of cooling laxative vegetables, and by drinking butter-milk, whey sweetened with honey, or the like. A fistulous ulcer can seldom be cured without an operation. It must either be laid open so as to have its callous parts destroyed by some corrosive application, or they must be entirely cut away by the knife; but, as this operation requires the hand of an expert surgeon, there is no occasion to describe it. Ulcers about the *anus* are most apt to become fistulous, and are very difficult to cure. Some, indeed, pretend to have found Ward's fistula-paste very successful in this complaint. It is not a dangerous medicine, and, being easily procured, it may deserve a trial; but, as these ulcers generally proceed from an ill habit of body, they will seldom yield to any thing except a long course of regimen, assisted by medicines, which are calculated to correct that particular habit, and to induce an almost total change in the constitution.

OF DISLOCATIONS.

WHEN a bone is moved out of its place or articulation, so as to impede its proper functions, it is said to be luxated or dislocated. As this often happens to persons in situations where no medical assistance can be obtained, by which means limbs, and even lives, are frequently lost, we shall endeavour to point out the method of reducing the most common luxations, and those which require immediate assistance. Any person of common sense and resolution, who is present when a dislocation happens, may often be of more service to the patient than the most expert surgeon can after the swelling and inflammation have come on. When these are present, it is difficult to know the state of the joint, and dangerous to attempt a reduction; and, by waiting till they are gone off, the muscles become so relaxed, and the cavity filled up, that the bone can never afterwards be retained in its place. A recent dislocation may generally be reduced by extension alone, which must always be greater or less according to the strength of the muscles which move the joint, the age, robustness, and other circumstances, of the patient. When the bone has

been out of its place for any considerable time, and a swelling or inflammation has come on, it will be necessary to bleed the patient, and, after fomenting the part, to apply soft poultices with vinegar to it for some time before the reduction is attempted. All that is necessary after the reduction, is to apply cloths dipped in vinegar or camphorated spirits of wine to the part, and to keep it perfectly easy. Many bad consequences proceed from the neglect of this rule. A dislocation seldom happens without the tendons and ligaments of the joint being stretched and sometimes torn. When these are kept easy till they recover their strength and tone, all goes on very well; but, if the injury be increased by too frequent an exertion of the parts, no wonder if they be found weak and diseased ever after.

DISLOCATION OF THE JAW.---The usual method of reducing a dislocated jaw, is to set the patient upon a low stool, so as an assistant may hold the head firm by pressing it against his breast. The operator is then to thrust his two thumbs, being first wrapped up with linen cloths that they may not slip, as far back into the patient's mouth as he can, while his fingers are applied to the jaw externally. After he has got firm hold of the jaw, he is to press it strongly downwards and backwards, by which means the elapsed heads of the jaw may be easily pushed into their former cavities. The peasants, in some parts of the country, have a peculiar way of performing this operation. One of them puts a handkerchief under the patient's chin, then, turning his back to that of the patient, pulls him up by the chin so as to suspend him from the ground. This method often succeeds, but we think it a dangerous one, and therefore recommend the former.

DISLOCATION OF THE NECK.---The neck may be dislocated by falls, violent blows, or the like. In this case, if the patient receives no assistance, he soon dies, which makes people imagine the neck was broken: it is, however, for the most part, only partially dislocated, and may be reduced by almost any person who has resolution enough to attempt it. A complete dislocation of the neck is instantaneous death. When the neck is dislocated, the patient is immediately deprived of all sense and motion; his neck swells, his countenance appears bloated, his chin lies upon his breast, and his face is generally turned towards one side. To reduce this dislocation, the unhappy person should immediately be laid upon his back on the ground, and the operator must place himself behind him so as to be able to lay hold of his head with both hands, while he makes a resistance by placing his knees against the patient's shoulders. In this posture he must pull the head with considerable force, gently twisting it at the same time, if the face be turned to one side, till he perceives that the joint is replaced, which may be known from the noise which the bones generally make when going in, the patient's beginning to breathe, and the head continuing in its natural posture. After the neck is reduced, the patient

tient ought to be bled, and should be suffered to rest for some days, till the parts recover their proper tone.

DISLOCATION OF THE SHOULDER.---The humerus or upper bone of the arm may be dislocated in various directions: it happens however most frequently downwards, but very seldom directly upwards. From the nature of its articulation, as well as from its exposure to external injuries, this bone is the most subject to dislocation of any in the body. A dislocation of the humerus may be known by a depression or cavity on the top of the shoulder, and an inability to move the arm. When the dislocation is downward or forward, the arm is elongated, and a ball or lump is perceived under the arm-pit; but when it is backward, there appears a protuberance behind the shoulder, and the arm is thrown forwards toward the breast. The usual method of reducing dislocations of the shoulder is to seat the patient upon a low stool, and to cause an assistant to hold his body so that it may not give way to the extension, while another lays hold of the arm a little above the elbow, and gradually extends it. The operator then puts a napkin under the patient's arm, and causes it to be tied behind his own neck; by this, while a sufficient extension is made, he lifts up the head of the bone, and with his hands directs it into its proper place. There are various machines invented for facilitating this operation, but the hand of an expert surgeon is always more safe. In young and delicate patients, it is a very easy matter to reduce the shoulder by extending the arm with one hand, and thrusting in the head of the bone with the other. In making the extension, the arm ought always to be a little bent.

DISLOCATION OF THE ELBOW.---The bones of the fore-arm may be dislocated in any direction. When this is the case, a protuberance may be observed on that side of the arm towards which the bone is pushed, from which, and the patient's inability to bend his arm, a dislocation of this joint may easily be known. Two assistants are generally necessary for reducing a dislocation of the elbow; one of them must lay hold of the arm above, and the other below, the joint, and make a pretty strong extension, while the operator returns the bones into their proper place. Afterwards the arm must be bent, and suspended for some time with a sling about the neck. Luxations of the wrist and fingers are to be reduced in the same manner as those of the elbow, viz. by making an extension in different directions, and thrusting the head of the bone into its place.

DISLOCATION OF THE THIGH.---When the thigh-bone is dislocated forward and downward, the knee and foot are turned out, and the leg is longer than the other; but, when it is displaced backward, it is usually pushed upward at the same time, by which means the limb is shortened, and the foot is turned inwards. When the thigh-bone is displaced forward and downward, the patient, in order to have it reduced,

reduced, must be laid upon his back, and made fast by bandages, or held by assistants, while by others an extension is made by means of slings fixed about the bottom of the thigh a little above the knee. While the extension is made, the operator must push the head of the bone outward, till it gets into the socket. If the dislocation be outward, the patient must be laid upon his face, and, during the extension, the head of the bone must be pushed inward. Dislocations of the knees, ancles, and toes, are reduced much in the same manner as those of the upper extremities, viz. by making an extension in opposite directions, while the operator replaces the bones. In many cases, however, the extension alone is sufficient, and the bone will slip into its place merely by pulling the limb with sufficient force. It is not hereby meant, that force alone is sufficient for the reduction of dislocations.

OF BROKEN BONES, &c.

THERE is, in most country villages, some person who pretends to the art of reducing fractures. Though, in general, such persons are very ignorant, yet some of them are very successful; which evidently proves, that a small degree of learning, with a sufficient share of common sense and a mechanical head, will enable a man to be useful in this way. We would, however, advise people never to employ such operators, when an expert and skilful surgeon can be had; but, when that is impracticable, they must be employed: we shall therefore recommend the following hints to their consideration: when a large bone is broken, the patient's diet ought, in all respects, to be the same as in an inflammatory fever. He should likewise be kept quiet and cool, and his body open by emollient clysters, or, if these cannot be conveniently administered, by food that is of an opening quality; as stewed prunes, apples boiled in milk, boiled spinach, and the like. It ought however to be here remarked, that persons who have been accustomed to live high are not all of a sudden to be reduced to a very low diet. This might have fatal effects. There is often a necessity for indulging even bad habits, in some measure, where the nature of the disease might require a different treatment. It will generally be necessary to bleed the patient immediately after a fracture, especially if he be young, of a full habit, or has, at the same time, received any bruise or contusion. This operation should not only be performed soon after the accident happens, but, if the patient be very feverish, it may be repeated next day. When several of the ribs are broken, bleeding is peculiarly necessary. If any of the large bones which support the body are broken, the patient must keep his bed for several weeks. It is by no means necessary, however, that he should lie all that time, as is customary, upon his back. This situation sinks the spirits, galls and frets the patient's skin, and renders him very uneasy. After the second week he may be gently raised up, and may sit several

hours, supported by a bed-chair, or the like, which will greatly relieve him. Great care, however, must be taken in raising him up, and laying him down, that he make no exertions himself, otherwise the action of the muscles may pull the bone out of its place. It has been customary, when a bone was broken, to keep the limb for five or six weeks continually upon the stretch. But this is a bad posture. It is both uneasy to the patient and unfavourable to the cure. The best situation is to keep the limb a little bent. This is the posture into which every animal puts its limbs when it goes to rest, and in which fewest muscles are upon the stretch. It is easily effected, by either laying the patient upon his side, or making the bed so as to favour this position of the limb. All that art can do towards the cure of a broken bone, is to lay it perfectly straight, and to keep it quite easy. All tight bandages do hurt. They had much better be wanting altogether. A great many of the bad consequences which succeed to fractured bones are owing to tight bandages. The best method of retention is by two or more splints made of leather or pasteboard. These, if moistened before they be applied, soon assume the shape of the included member, and are sufficient, by the assistance of a very slight bandage, for all the purposes of retention. The splints should always be as long as the limb, with holes cut for the ancles when the fracture is in the leg. In fractures of the ribs, where a bandage cannot be properly used, an adhesive plaister may be applied over the part. The patient, in this case, ought to keep himself quite easy, avoiding every thing that may occasion sneezing, laughing, coughing, or the like. He ought to keep his body in a straight posture, and should take care that his stomach be constantly distended, by taking frequently some light food, and drinking freely of weak watery liquors. The most proper external application for a fracture is *oxycrate*, or a mixture of vinegar and water. The bandages should be wet with this at every dressing.

OF STRAINS.

STRAINS are often attended with worse consequences than broken bones. The reason is obvious, they are generally neglected. When a bone is broken, the patient is obliged to keep the member easy, because he cannot make use of it; but, when a joint is only strained, the person, finding he can still make a shift to move it, is sorry to lose his time for so trifling an ailment. In this way he deceives himself, and converts into an incurable malady what might have been removed by only keeping the part easy for a few days. Country people generally immerse a strained limb in cold water. This is very proper, provided it be done immediately, and not kept in too long. But the custom of keeping the part immersed in cold water for a long time, is certainly dangerous. It relaxes instead of bracing the part, and is more likely

likely to produce a disease than remove one. Wrapping a garter, or some other bandage, pretty tight about the strained part, is likewise of use. It helps to restore the proper tone of the vessels, and prevents the action of the parts from increasing the disease. It should not however be applied too tight. Bleeding near the affected part will frequently have a very good effect: but what we would recommend above all is ease. It is more to be depended on than any medicine, and seldom fails to remove the complaint.

OF RUPTURES.

CHILDREN and very old people are most liable to this disease. In the former it is generally occasioned by excessive crying, coughing, vomiting, or the like. In the latter, it is commonly the effect of blows or violent exertions of the strength, as leaping, carrying great weights, &c. In both, a relaxed habit, indolence, and an oily or very moist diet, dispose the body to this disease. A rupture sometimes proves fatal before it is discovered. Whenever sickness, vomiting, and obstinate costiveness, give reason to suspect an obstruction of the bowels, all those places where ruptures usually happen ought carefully to be examined. The protrusion of a very small part of the gut will occasion all these symptoms; and, if not returned in due time, will prove mortal. On the first appearance of a rupture in an infant, it ought to be laid upon its back, with its head very low. While in this posture, if the gut does not return of itself, it may easily be put up by gentle pressure. After it is returned, a piece of sticking-plaster may be applied over the part, and a proper truss or bandage must be constantly worn for a considerable time. The method of making and applying these rupture-bandages for children is pretty well known. The child must, as far as possible, be kept from crying, and from all violent motion, till the rupture is quite healed. In adults, when the gut has been forced down with great violence, or happens, from any cause, to be inflamed, there is often great difficulty in returning it. The patient should be bled; after which, he must be laid upon his back, with his head very low, and his breech raised high with pillows. In this situation flannel cloths wrung out of a decoction of mallows and camomile-flowers, or, if these are not at hand, of warm water, must be applied for a considerable time. A clyster made of this decoction, with a large spoonful of butter and a little salt, may be afterwards thrown up. If these should not prove successful, recourse must be had to pressure. If the tumour be very hard, considerable force will be necessary; but it is not force alone which succeeds here. The operator, at the same time that he makes a pressure with the palms of his hands, must with his fingers artfully conduct the gut in by the same aperture through which it came out. The manner of doing this can be much easier conceived than described. Should these
endeavours

endeavours prove ineffectual, clysters of the smoke of tobacco may be tried. These have been often known to succeed where every other method failed. An adult, after the gut has been returned, must wear a steel bandage. It is needless to describe this, as it may always be had ready-made from the artists. Such bandages are generally irksome to the wearer for some time, but by custom they become quite easy. No person who has had a rupture after he arrived at man's estate should ever be without one of these bandages. Persons who have a rupture ought carefully to avoid all violent exercise, carrying great weights, leaping, running, and the like. They should likewise avoid windy aliment and strong liquors; and should carefully guard against catching cold.

OF RECOVERING DROWNED PERSONS.

WHEN a person has remained above a quarter of an hour under water, there can be no considerable hopes of recovery. But, as several circumstances may happen to have continued life, in such an unfortunate situation, beyond the ordinary term, we should never too soon resign the unhappy object to his fate, but try every method for his relief, as there are many well-attested proofs of the recovery of persons to life and health who had been taken out of the water apparently dead, and who remained a considerable time without exhibiting any signs of life. The first thing to be done, after the body is taken out of the water, is to convey it, as soon as possible, to some convenient place where the necessary operations for its recovery may be performed. In attempting to recover persons apparently drowned, the principal intention to be pursued is, to restore the natural warmth, upon which all the vital functions depend; and to excite these functions by the application of stimulants, not only to the skin, but likewise to the lungs, intestines, &c. Though cold was by no means the cause of the person's death, yet it will prove an effectual obstacle to his recovery. For this reason, after stripping him of his wet clothes, his body must be strongly rubbed for a considerable time with coarse linen cloths, as warm as they can be made; and, as soon as a well-heated bed can be got ready, he may be laid in it, and the rubbing should be continued. Warm cloths ought likewise to be frequently applied to the stomach and bowels, and hot bricks, or bottles of warm water, to the soles of the feet, and to the palms of the hands. Strong volatile spirits should be frequently applied to the nose; and the spine of the back and pit of the stomach may be rubbed with warm brandy or spirit of wine. The temples ought always to be chafed with volatile spirits; and stimulating powders, as that of tobacco or *marjoram*, may be blown up the nostrils. To renew the breathing, a strong person may blow his own breath into the patient's mouth with all the force he can, holding his nostrils at the same time. When it can be perceived, by the rising of the chest or belly,

belly, that the lungs are filled with air, the person ought to desist from blowing, and should press the breast and belly so as to expel the air again; and this operation may be repeated for some time, alternately inflating and depressing the lungs so as to imitate natural respiration. But the author, after a long and laborious course of practical chemistry, has discovered a liquid medium called the **SOLAR TINCTURE**, which possessing all the properties of animated blood, will, by being poured into the stomach, reanimate, and restore suspended life; and, for this benevolent purpose, it supercedes every other act and invention. Those who have studied the admirable construction of the human machine know, that its dissolution cannot naturally happen but by a general decay of the whole system, when the vessels become impervious to the fluids, the circulation weakened or destroyed, and the vital organs no longer able to perform their office. But, when their functions are merely suspended by some sudden shock, it may be likened to the state of a watch stopped by a fall, which resumes its motion the instant that injury is repaired. In the animal economy, "the **BLOOD** is the **LIFE**;" therefore, if its circulation be suspended or destroyed, death follows. But if the blood can be re-agitated, and its circulation resumed, life will of necessity be restored. For this purpose let two or three table spoonfuls of the Solar Tincture be introduced as early as possible into the stomach, and rubbed profusely in by a warm hand, upon the spine of the back, loins, breast, and region of the heart, and poured into the wound, if there be any, the warm stimulating quality of the medicine, assisted by the external heat and friction, will rouse the stagnant blood and juices, particularly in the grand reservoir the heart, where rarefying, pressing every way, and being resisted by the valves, will swell so as to fill the flaccid right auricle of the heart, which by the shock had become empty and at rest; and thus stimulating its fibres, will put them into motion. The right auricle being thus filled, and stimulated into contraction, fills the ventricle; which, by this means being irritated, likewise contracts and empties itself into the pulmonary artery; and, the moment this is done, the circulation begins again where it left off, and the lungs, being filled by the dephlogisticated air contained in the medicine, begin to act, and life is restored, provided the organs and juices are in a fit disposition for it, which they undoubtedly are much oftener than is imagined. Nor is this stimulating action of the Tincture upon the heart at all surprising; for every medical man knows, or ought to know, that the heart, even after it is taken out of the body, if it be pricked with a pin, or hath warm water thrown upon it, will beat afresh, and endeavour to exert its functions, though for some time before it had been motionless. No person therefore ought to be considered dead, until the energy of the blood is so far gone, that it can never again be agitated so as to fill and stimulate into contraction the right *sinus venosus* and auricle of the heart. To demonstrate the reanimating powers of this medicine, experiments may be made

upon a fowl, lamb, cat, dog, or other animal, by plunging them under water until they are apparently dead, or piercing them through the head, or any part of the body except the heart; by suffocation, or an electrical shock; for sudden death, howsoever it happens, whether by drowning or otherwise, is much the same as to its effects on the vital organs, consequently they are all to be treated in a similar manner. This medicine is likewise an absolute cure for the scurvy, in its most advanced stages; and is a sovereign remedy for relaxations, debility, lassitude, tremors, sinking of the spirits, and all those nervous affections which harass and oppress the weak, sedentary, and delicate, and are often the consequences of high living, and luxuriant indulgencies, without bodily exercise and fresh air. In all these cases, the Solar Tincture is calculated to warm and steady the cold tremulous nerves; to sheath and invigorate the muscular system; to animate the spirits; and renovate the whole man, whereby the chill watery fluids become rich and balsamic, and the circulation resumes its healthful state. It may be had of every stationer who sells my works.

OF CONVULSION FITS.

CONVULSION fits often constitute the last scene of acute or chronic disorders. When this is the case, there can remain but small hopes of the patient's recovery after expiring in a fit. But when a person, who appears to be in perfect health, is suddenly seized with a convulsion fit, and seems to expire, some attempts ought always to be made to restore him to life. Infants are most liable to convulsions, and are often carried off very suddenly by one or more fits about the time of teething. There are many well-authenticated accounts of infants having been restored to life, after they had to all appearance expired in convulsions; but we shall only relate the following instance mentioned by Dr. Johnson in his pamphlet on the practicability of recovering persons visibly dead: In the parish of St. Clemens, at Colchester, a child of six months old, lying upon its mother's lap, having had the breast, was seized with a strong convulsion fit, which lasted so long, and ended with so total a privation of motion in the body, lungs, and pulse, that it was deemed absolutely dead. It was accordingly stripped, laid out, the passing-bell ordered to be tolled, and a coffin to be made; but a neighbouring gentlewoman, who used to admire the child, hearing of its sudden death, hastened to the house, and upon examining the child found it not cold, its joints limber, and fancied that a glass she held to its mouth and nose was a little damped with the breath; upon which she took the child in her lap, sat down before the fire, rubbed it, and kept it in gentle agitation. In a quarter of an hour she felt the heart begin to beat faintly; she then put a little of the mother's milk into its mouth, continued to rub its palms and soles, found the child begin to move, and the milk was swallowed; and in another quarter of an hour she had the satisfaction of restoring to its disconsolate mother the

babe

babe quite recovered, eager to lay hold of the breast, and able to suck again. The child thrive, had no more fits, is grown up, and at present alive. There are many other things which might be done, in case the above should not succeed; as rubbing the body with strong spirits, covering it with warm ashes or salt, blowing air into the lungs, throwing up warm stimulating clysters, or the smoke of tobacco, into the intestines, and such-like. When children are dead born, or expire soon after the birth, the same means ought to be used for their recovery as if they had expired in circumstances similar to those mentioned above. These directions may likewise be extended to adults, attention being always paid to the age and other circumstances of the patient. The means used with so much efficacy in recovering drowned persons are, with equal success, applicable to a number of cases where the powers of life seem in reality to be only suspended, and to remain capable of renewing all their functions, on being put into motion again. It is shocking to reflect, that for want of this consideration many persons have been committed to the grave, in whom the principles of life might have been revived. The cases wherein such endeavours are most likely to be attended with success, are all those called sudden deaths from an invisible cause, as apoplexies, hysterics, faintings, and many other disorders wherein persons in a moment sink down and expire. The various casualties in which they may be tried are, suffocations from the sulphureous damps of mines, coal-pits, &c. the unwholesome air of long-unopened wells or caverns; the noxious vapours arising from fermenting liquors; the steams of burning charcoal; sulphureous mineral acids; arsenical effluvia, &c. &c.

OF COLD BATHING.

IMMERSION in cold water is a custom which lays claim to the most remote antiquity: indeed it must have been coeval with man himself. The necessity of water for the purposes of cleanliness, and the pleasure arising from its application to the body in hot countries, must very early have recommended it to the human species. Even the example of other animals was sufficient to give the hint to man. By instinct many of them are led to apply cold water in this manner; and some, when deprived of its use, have been known to languish, and even to die. But whether the practice of cold bathing arose from necessity, reasoning, or imitation, is an inquiry of no importance; our business is to point out the advantages which may be derived from it, and to guard people against an improper use of it. The cold bath recommends itself in a variety of cases; and is peculiarly beneficial to the inhabitants of populous cities, who indulge in idleness and lead sedentary lives. In persons of this description the action of the solids is always too weak, which induces a languid circulation, a crude indigested mass of humours, and obstructions in the capillary

vessels and glandular system. Cold water, from its gravity, as well as its tonic power, is well calculated either to obviate or remove these symptoms. It accelerates the motion of the blood, promotes the different secretions, and gives permanent vigour to the solids. But all these important purposes will be more essentially answered by the application of salt water. This ought not only to be preferred on account of its superior gravity, but likewise for its greater power of stimulating the skin, which promotes the perspiration, and prevents the patient from catching cold. It is necessary, however, to observe, that cold bathing is more likely to prevent than to remove obstructions of the glandular or lymphatic system. Indeed, when these have arrived at a certain pitch, they are not to be removed by any means. In this case the cold bath will only aggravate the symptoms, and hurry the unhappy patient into an untimely grave. It is therefore of the utmost importance, previous to the patient's entering upon the use of the cold bath, to determine whether or not he labours under any obstinate obstructions of the lungs or other viscera; and, where this is the case, cold bathing ought strictly to be prohibited. In what is called a plethoric state, or too great a fulness of the body, it is likewise dangerous to use the cold bath, without due preparation. In this case there is great danger of bursting a blood-vessel, or occasioning an inflammation of the brain, or some of the viscera. This precaution is the more necessary to citizens, as most of them live full, and are of a gross habit. Yet, what is very remarkable, these people resort in crowds every season to the sea-side, and plunge in the water without the least consideration. No doubt they often escape with impunity, but does this give a sanction to the practice? Persons of this description ought by no means to bathe, unless the body has been previously prepared by suitable evacuations. Another class of patients, who stand peculiarly in need of the bracing qualities of cold water, is the nervous. This includes a great number of the male, and almost all the female, inhabitants of great cities. Yet even those persons ought to be cautious in using the cold bath. Nervous people have often weak bowels, and may, as well as other, be subject to congestions and obstructions of the viscera; and in this case they will not be able to bear the effects of the cold water. For them, therefore, and indeed for all delicate people, the best plan would be to accustom themselves to it by the most pleasing and gentle degrees. They ought to begin with the temperate bath, and gradually use it cooler, till at length the coldest proves quite agreeable. Nature revolts against all great transitions; and those who do violence to her dictates have often cause to repent of their temerity. To young people, and particularly to children, cold bathing is of the last importance. Their lax fibres render its tonic powers peculiarly proper. It promotes their growth, increases their strength, and prevents a variety of diseases incident to childhood. The most proper time of the day for using the cold bath is

no doubt the morning, or at least before dinner; and the best mode, that of quick immersion. As cold bathing has a constant tendency to propel the blood and other humours towards the head, it ought to be a rule always to wet that part as soon as possible. By due attention to this circumstance, there is reason to believe, that violent head-achs, and other complaints, which frequently proceed from cold bathing, might be often prevented. The cold bath, when too long continued in, not only occasions an excessive flux of humours towards the head, but chills the blood, cramps the muscles, relaxes the nerves, and wholly defeats the intention of bathing. Hence, by not adverting to this circumstance, expert swimmers are often injured, and sometimes even lose their lives. All the beneficial purposes of cold bathing are answered by one single immersion; and the patient ought to be rubbed dry the moment he comes out of the water, and should continue to take exercise for some time after. When cold bathing occasions chiliness, loss of appetite, listlessness, pain of the breast or bowels, a prostration of strength, or violent head-achs, it ought to be discontinued.

OF DRINKING THE MINERAL WATERS.

THE waters most in use for medical purposes in Britain, are those impregnated with salts, sulphur, iron, and mephitic air, either separately, or variously combined. The errors which so often defeat the intention of drinking the purgative mineral waters, and which so frequently prove injurious to the patient, proceed from the manner of using them, the quantity taken, the regimen pursued, or using them in cases where they are not proper. Drinking the water in too great quantity, not only injures the bowels and occasions indigestion, but generally defeats the intention for which it is taken. The diseases for the cure of which mineral waters are chiefly celebrated, are mostly of the chronic kind; and it is well known that such diseases can only be cured by the slow operation of alteratives, or such medicines as act by inducing a gradual change in the habit. This requires length of time, and never can be effected by medicines which run off by stool, and operate chiefly on the first passages. Those who wish for the cure of any obstinate malady from the mineral waters, ought to take them in such a manner as hardly to produce any effect whatever on the bowels. With this view a half-pint glass may be drunk at bed-time, and the same quantity an hour before breakfast, dinner, and supper. The dose, however, must vary according to circumstances. Even the quantity mentioned above will purge some persons, while others will drink twice as much without being in the least moved by it. Its operation on the bowels is the only standard for using the water as an alterative. No more ought to be taken than barely to move the body; nor is it always necessary to carry it this length, provided the water goes off

by the other emunctories, and does not occasion a chilness, or flatulency in the stomach or bowels. When the water is intended to purge, the quantity mentioned above may be all taken before breakfast. To promote the operation of mineral waters, and to carry them through the system, exercise is indispensably necessary. This may be taken in any manner that is most agreeable to the patient, but he ought never to carry it to excess. As a purgative, these waters are chiefly recommended in diseases of the first passages, accompanied with, or proceeding from, inactivity of the stomach and bowels, acidity, indigestion, vitiated bile, worms, putrid sores, the piles, and jaundice. In most cases of this kind, they are the best medicines that can be administered. But, when used with this view, it is sufficient to take them twice, or at most three times, a week, so as to move the body three or four times; and it will be proper to continue this course for some weeks. But the operation of the more active mineral waters is not confined to the bowels. They often promote the discharge of urine, and not unfrequently increase the perspiration. This shews that they are capable of penetrating into every part of the body, and of stimulating the whole system. Hence arises their efficacy in removing the most obstinate of all disorders, obstructions of the glandular and lymphatic system. Under this class is comprehended the scrophula or king's evil, indolent tumours, obstructions of the liver, spleen, kidneys, and mesenteric glands. When these great purposes are to be effected, the waters must be used in the gradual manner mentioned above, and persisted in for a length of time. It will be proper, however, now and then to discontinue their use for a few days. The next great class of diseases, where mineral waters are found to be beneficial, are those of the skin, as the itch, scab, tetters, ring-worms, scaly eruptions, leprosies, blotches, foul ulcers, &c. Though these may seem superficial, yet they are often the most obstinate which the physician has to encounter, and not unfrequently set his skill at defiance: but they will sometimes yield to the application of mineral waters for a sufficient length of time, and in most cases of this kind these waters deserve a trial.

OF THE VENEREAL DISEASE.

IT is peculiarly unfortunate for the unhappy persons who contract this disease, that it lies under a sort of disgrace. This renders disguise necessary, and makes the patient either conceal his disorder altogether, or apply to those who promise a sudden and secret cure; but who in fact only remove the symptoms for a time, while they fix the disease deeper in the habit. By this means a slight infection, which might have been easily removed, is often converted into an obstinate, and sometimes incurable, malady. Another unfavourable circumstance attending this disease is, that it assumes a variety of different shapes, and may with more propriety be called an

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an assemblage of diseases, than a single one. No two diseases can require a more different method of treatment than this does in its different stages. Hence the folly and danger of trusting to any particular nostrum for the cure of it. Such nostrums are however generally administered in the same manner to all who apply for them, without the least regard to the state of the disease, the constitution of the patient, the degree of infection, and a thousand other circumstances of the utmost importance. Though the venereal disease is generally the fruit of unlawful embraces, yet it may be communicated to the innocent as well as the guilty. Infants, nurses, midwives, and married women whose husbands lead dissolute lives, are often affected with it, and frequently lose their lives by not being aware of their danger in due time. The unhappy condition of such persons certainly requires that we should endeavour to point out the symptoms and cure of this too common disease.

OF THE VIRULENT GONORRHŒA.

THE virulent gonorrhœa is an involuntary discharge of infectious matter from the parts of generation in either sex. It generally makes its appearance within eight or ten days after the infection has been received; sometimes indeed it appears in two or three days, and at other times not before the end of four or five weeks. Previous to the discharge, the patient feels an itching with a small degree of pain in the genitals. Afterwards a thin glary matter begins to distil from the urinary passage, which stains the linen, and occasions a small degree of titillation, particularly in the time of making water; this, gradually increasing, arises at length to a degree of heat and pain, which are chiefly perceived about the extremity of the urinary passage, where a slight degree of redness and inflammation begin to appear. As the disorder advances, the pain, heat of urine, and running, increase, while fresh symptoms daily ensue. In men the erections become painful and involuntary, and are more frequent and lasting than when natural. This symptom is most troublesome when the patient is warm in bed. The pain, which was at first only perceived towards the extremity, now begins to reach all up the urinary passage, and is most intense just after the patient has done making water. The running gradually recedes from the colour of seed, grows yellow, and at length puts on the appearance of matter. When the disorder has arrived at its height, all the symptoms are more intense; the heat of urine is so great, that the patient dreads the making water, and, though he feels a constant inclination this way, yet it is rendered with the greatest difficulty, and often only by drops: the involuntary erections now become extremely painful and frequent; there is also a pain, heat, and sense of fulness, about the seat, and the running is plentiful and sharp, of a brown greenish, and sometimes of a bloody, colour.

CURE.

CURE.---When a person has reason to suspect that he has caught the venereal infection, he ought most strictly to observe a cooling regimen, to avoid every thing of a heating nature, as wines, spirituous liquors, rich sauces, spiced, salted, high-seasoned, and smoke-dried, provisions, &c. as also all aromatic and stimulating vegetables, as onions, garlic, shallot, nutmeg, mustard, cinnamon, mace, ginger, and such-like. His food ought chiefly to consist of mild vegetables, milk, broths, light puddings, panado, gruels, &c. His drink may be barley-water, milk and water, decoctions of marsh-mallows and liquorice, linseed-tea, or clear whey. Of these he ought to drink plentifully. Violent exercise of all kinds, especially riding on horseback, and venereal pleasures, are to be avoided. The patient must beware of cold, and, when the inflammation is violent, he ought to keep his bed. A virulent gonorrhœa cannot always be cured speedily and effectually at the same time. The patient ought therefore not to expect, nor the physician to promise, it. It will often continue for two or three weeks, and sometimes for five or six, even where the treatment has been very proper. Sometimes indeed a slight infection may be carried off in a few days, by bathing the parts in warm milk and water, and injecting frequently up the urethra a little sweet oil or linseed-tea about the warmth of new milk. Should these not succeed in carrying off the infection, they will at least have a tendency to lessen its virulence. To effect a cure, however, astringent injections will generally be found necessary. These may be various ways prepared, but those made with the white vitriol are both most safe and efficacious. They can be made stronger or weaker as circumstances may require, but it is best to begin with the more gentle, and increase their power if necessary. A drachm of white vitriol may be dissolved in eight or nine ounces of common or rose-water, and an ordinary syringe full of it thrown up three or four times a-day. If this quantity does not perform a cure, it may be repeated, and the dose increased. Whether injections be used or not, cooling purges are always proper in the gonorrhœa. They ought not however to be of the strong or drastic kind. Whatever raises a violent commotion in the body increases the danger, and tends to drive the disease deeper into the habit. Procuring two or three stools every second or third day for the first fortnight, and the same number every fourth or fifth day for the second, will generally be sufficient to remove the inflammatory symptoms, to diminish the running, and to change the colour and consistence of the matter, which gradually becomes more clear and ropy as the virulence abates. When the inflammatory symptoms run high, bleeding is always necessary at the beginning. This operation, as in other topical inflammations, must be repeated according to the strength and constitution of the patient, and the vehemence and urgency of the symptoms. Medicines which promote the secretion of urine are likewise proper in this stage of the disorder. For

this purpose an ounce of nitre and two ounces of gum arabic, pounded together, may be divided into twenty-four doses, one of which may be taken frequently, in a cup of the patient's drink. If these should make him pass his urine so often as to become troublesome to him, he may either take them less frequently, or leave out the nitre altogether, and take equal parts of gum arabic and cream of tartar. These may be pounded together, and a tea-spoonful taken in a cup of the patient's drink four or five times a day. I have generally found this answer extremely well both as a diuretic, and for keeping the body gently open. When the pain and inflammation are seated high, towards the neck of the bladder, it will be proper frequently to throw up an emollient clyster, which, besides the benefit of procuring stools, will serve as a fomentation to the inflamed parts. Soft poultices, when they can conveniently be applied to the parts, are of great service. They may be made of the flour of linseed, or of wheat-bread and milk, softened with fresh butter or sweet oil. When poultices cannot be conveniently used, cloths wrung out of warm water, or bladders filled with warm milk and water, may be applied. Few things tend more to keep off inflammation in the spermatic vessels than a proper truss for the scrotum. It ought to be so contrived as to support the testicles, and should be worn from the first appearance of the disease till it has ceased some weeks. Many people, on the first appearance of a gonorrhœa, fly to the use of mercury. This is a bad plan. Mercury is often not at all necessary in a gonorrhœa; and, when taken too early, it does mischief. It may be necessary to complete the cure, but it can never be proper at the commencement of it. When bleeding, purging, fomentations, and the other things recommended above, have eased the pain, softened the pulse, relieved the heat of urine, and rendered the involuntary erections less frequent, the patient may begin to use mercury in any form that is least disagreeable to him. If he takes the common mercurial pill, two at night and one in the morning will be a sufficient dose at first. Should they affect the mouth too much, the dose must be lessened; if not at all, it may be gradually increased to five or six pills in the day. If calomel be thought preferable, two or three grains of it, formed into a bolus with a little of the conserve of hips, may be taken at bed-time, and the dose gradually increased to eight or ten grains. One of the most common preparations of mercury now in use is the corrosive sublimate. This may be taken in the manner hereafter recommended under the confirmed lues or pox: it is one of the most safe and efficacious medicines when properly used. The above medicines may either be taken every day or every other day, as the patient is able to bear them. They ought never to be taken in such quantity as to raise a salivation, unless in a very slight degree. The disease may be more safely, and as certainly, cured without a salivation as with it. When the mercury runs off by the mouth, it is not so successful in carrying off the disease,

as when it continues longer in the body, and is discharged gradually. Should the patient be purged or griped in the night by the mercury, he must take an infusion of fenna, or some other purgative, and drink freely of water-gruel to prevent bloody stools, which are very apt to happen should the patient catch cold, or if the mercury has not been duly prepared. When the bowels are weak, and the mercury is apt to gripe or purge, these disagreeable consequences may be prevented by taking, with the above pills or bolus, half a drachm or two scruples of diascordium, or of the Japonic confection. To prevent the disagreeable circumstance of the mercury's affecting the mouth too much, or bringing on a salivation, it may be combined with purgatives. With this view the laxative mercurial pill has been contrived, the usual dose of which is half a drachm, or three pills, night and morning, to be repeated every other day; but the safer way is for the patient to begin with two, or even with one, pill, gradually increasing the dose. To such persons as can neither swallow a bolus nor a pill, mercury may be given in a liquid form, as it can be suspended even in a watery vehicle, by means of gum-arabic; which not only serves this purpose, but likewise prevents the mercury from affecting the mouth, and renders it in many respects a better medicine. Take quicksilver one drachm; gum-arabic reduced to a mucilage, in a marble mortar, until the globules of mercury entirely disappear: afterwards add gradually, still continuing the trituration, half an ounce of balsamic syrup, and eight ounces of simple cinnamon-water. Two table-spoonfuls of this solution may be taken night and morning. It happens very fortunately for those who cannot be brought to take mercury inwardly, and likewise for persons whose bowels are too tender to bear it, that an external application of it answers equally well, and, in some respects, better. It must be acknowledged, that mercury, taken inwardly for any length of time, greatly weakens and disorders the bowels; for which reason, when a plentiful use of it becomes necessary, we would prefer rubbing to the mercurial pills. The common mercurial or blue ointment, will answer very well. Of that which is made by rubbing together equal quantities of hog's-lard and quicksilver, about a drachm may be used at a time. The best time for rubbing it on is at night, and the most proper place the inner-side of the thighs. The patient should stand before the fire when he rubs, and should wear flannel drawers next his skin at the time he is using the ointment. If ointment of a weaker or stronger kind be used, the quantity must be increased or diminished in proportion. If, during the use of the ointment, the inflammation of the genital parts, together with the heat and feverishness, should return, or, if the mouth should grow sore, the gums tender, and the breath become offensive, a dose or two of Glauber's salts, or some other cooling purge, may be taken, and the rubbing intermitted for a few days. As soon, however, as the signs of spitting are gone off, if the viru-

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lency be not quite corrected, the ointment must be repeated, but in smaller quantities, and at longer intervals, than before. Whatever way mercury is administered, its use must be persisted in as long as any virulency is suspected to remain. When the above treatment has removed the heat of urine, and soreness of the genital parts; when the quantity of running is considerably lessened, without any pain or swelling in the groin or testicle superventing; when the patient is free from involuntary erections; and lastly, when the running becomes pale, whitish, thick, void of ill smell, and tenacious or ropy; when all or most of these symptoms appear, the gonorrhœa is arrived at its last stage, and we may gradually proceed to treat it as a gleet with astringent and agglutinating medicines.

OF GLEETS.

A GONORRHŒA frequently repeated, or improperly treated, often ends in a gleet, which may either proceed from relaxation, or from some remains of the disease. It is, however, of the greatest importance, in the cure of the gleet, to know from which of these causes it proceeds. When the discharge proves very obstinate, and receives little or no check from astringent remedies, there is ground to suspect that it is owing to the latter; but, if the drain is inconstant, and is chiefly observable when the patient is stimulated by lascivious ideas, or upon straining to go to stool, we may reasonably conclude that it is chiefly owing to the former. In the cure of a gleet proceeding from relaxation, the principal design is to brace, and restore a proper degree of tension to the debilitated and relaxed vessels. For this purpose, besides the medicines recommended in the gonorrhœa, the patient may have recourse to stronger and more powerful astringents, as the Peruvian bark, alum, vitriol, galls, tormentil, bistort, balauftines, tincture of gum-kino, &c. The injections may be rendered more astringent by the addition of a few grains of alum, or increasing the quantity of vitriol as far as the parts are able to bear it. The last remedy which we shall mention in this case is the cold bath, than which there is not perhaps a more powerful bracer in the whole compass of medicine. It ought never to be omitted in this species of gleet, unless there be something in the constitution of the patient which renders the use of it unsafe. The chief objections to the use of the cold bath are, a full habit, and an unsound state of the viscera. The danger from the former may always be lessened, if not removed, by purging and bleeding; but the latter is an unsurmountable obstacle, as the pressure of the water, and the sudden contraction of the external vessels, by throwing the blood with too much force upon the internal parts, are apt to occasion ruptures of the vessels, or a flux of humours upon the diseased organs. But, where no objection of this kind prevails, the patient ought to plunge over head in water every morning fasting, for three or four weeks together.

together. He should not, however, stay long in the water, and should take care to have his skin dried as soon as he comes out. The regimen proper in this case is the same as was mentioned in the last stage of the gonorrhœa: the diet must be drying and astringent, and the drink Spa, Pyrmont, or Bristol, waters, with which a little claret or red wine may sometimes be mixed. Any person may now afford to drink these waters, as they can be every where prepared at almost no expence, by a mixture of common chalk and oil of vitriol. When the gleet does not yield to these medicines, there is reason to suspect that it proceeds from ulcers. In this case, recourse must be had to mercury, and such medicines as tend to correct any predominant acrimony with which the juices may be affected, as the decoction of china, sarsaparilla, saffraas, or the like. The best remedy for the cure of ulcers in the urinary passage, are the suppurating candles or bougies; as these are prepared various ways, and are generally to be bought ready-made, it is needless to spend time in enumerating the different ingredients of which they are composed, or teaching the manner of preparing them: before a bougie be introduced into the urethra, however, it should be smeared all over with sweet oil, to prevent it from stimulating too suddenly; it may be suffered to continue in from one to seven or eight hours, according as the patient can bear it. Obstinate ulcers are not only often healed, but tumours and excrescences in the urinary passages taken away, and an obstruction of urine removed, by means of bougies.

OF THE SWELLED TESTICLE.

THE swelled testicle may either proceed from infection lately contracted, or from the venereal poison lurking in the blood: the latter indeed is not very common, but the former frequently happens both in the first and second stages of a gonorrhœa; particularly when the running is unseasonably checked, by cold, hard drinking, strong drastic purges, violent exercise, the too early use of astringent medicines, or the like. In the inflammatory stage bleeding is necessary, which must be repeated according to the urgency of the symptoms. The food must be light, and the drink diluting. High-seasoned food, flesh, wines, and every thing of a heating nature, are to be avoided. Fomentations are of singular service. Poultices of bread and milk, softened with fresh butter or oil, are likewise very proper, and ought constantly to be applied when the patient is in bed: when he is up, the testicle should be kept warm, and supported by a bag or truss, which may easily be contrived in such a manner as to prevent the weight of the testicle from having any effect. If it should be found impracticable to clear the testicle by the cooling regimen now pointed out, and extended according to circumstances, it will be necessary to lead the patient through such a complete antivenereal course as shall ensure him
against

against any future uneasiness. For this purpose, besides rubbing the mercurial ointment on the part, if free from pain, or on the thighs, as directed in the gonorrhœa, the patient must be confined to bed, if necessary, for five or six weeks, suspending the testicle all the while with a bag or truss, and plying him inwardly with strong decoctions of sarsaparilla. When these means do not succeed, and there is reason to suspect a scrophulous or cancerous habit, either of which may support a scirrhus induration, after the venereal poison is corrected, the parts should be fomented daily with a decoction of hemlock, the bruised leaves of which may likewise be added to the poultice, and the extract at the same time taken inwardly. By this method, diseased testicles of two or three years standing, even when ulcerated, and affected with pricking and lancing pains, have been completely cured.

OF BUBOES.

VENEREAL buboes are hard tumours seated in the groin, occasioned by the venereal poison lodged in this part. They are of two kinds; viz. such as proceed from a recent infection, and such as accompany a confirmed lues. The cure of recent buboes, that is, such as appear soon after impure coition, may be first attempted by dispersion, and, if that should not succeed, by suppuration. To promote the dispersion of a buboe, the same regimen must be observed as was directed in the first stage of a gonorrhœa. The patient must likewise be bled, and take some cooling purges, as the decoction of tamarinds and senna, Glauber's salts, and the like. If, by this course, the swelling and other inflammatory symptoms abate, we may safely proceed to the use of mercury, which must be continued till the venereal virus is quite subdued. But, if the buboe should, from the beginning, be attended with great heat, pain, and pulsation, it will be proper to promote its suppuration. For this purpose the patient may be allowed to use his ordinary diet, and to take now and then a glass of wine. Emollient cataplasms, consisting of bread and milk softened with oil or fresh butter, may be applied to the part; and, in cold constitutions, where the tumour advances slowly, white-lily-roots boiled, or sliced onions raw, and a sufficient quantity of yellow basilicon, may be added to the poultice. When the tumour is ripe, which may be known by its conical figure, the softness of the skin, and a fluctuation of matter plainly to be felt under the finger, it may be opened either by caustic or a lancet, and afterwards dressed with digestive ointment. It sometimes, however, happens that buboes can neither be dispersed nor brought to a suppuration, but remain hard indolent tumours. In this case the indurated glands must be consumed by caustic; if they should become scirrhus, they must be dissolved by the application of hemlock, both externally and internally, as directed in the scirrhus testicle.

OF CHANCRES.

CHANCRES are superficial, callous, eating, ulcers; which may happen either with or without a gonorrhœa. They are commonly seated about the glans, and make their appearance in the following manner: first a little red pimple arises, which soon becomes pointed at top, and is filled with a whitish matter inclining to yellow. This pimple is hot, and itches generally before it breaks: afterwards it degenerates into an obstinate ulcer, the bottom of which is usually covered with a viscid mucus, and whose edges gradually become hard and callous. Sometimes the first appearance resembles a simple excoriation of the cuticle; which, however, if the cause be venereal, soon becomes a true chancre. A chancre is sometimes a primary affection, but it is much oftener symptomatic, and is the mark of a confirmed lues. Primary cancrs discover themselves soon after impure coition, and are generally seated in parts covered with a thin cuticle, as the lips, the nipples of women, the *glans penis* of men, &c. When venereal ulcers are seated in the lips, the infection may be communicated by kissing. When a chancre appears soon after impure coition, its treatment is nearly similar to that of the virulent gonorrhœa. The patient must observe the cooling regimen, lose a little blood, and take some gentle doses of salts and manna. The parts affected ought frequently to be bathed, or rather soaked, in warm milk and water, and, if the inflammation be great, an emollient poultice or cataplasm may be applied to them. This course will, in most cases, be sufficient to abate the inflammation, and prepare the patient for the use of mercury. Symptomatic chancres are commonly accompanied with ulcers in the throat, nocturnal pains, scurfy eruptions about the roots of the hair, and other symptoms of a confirmed lues. Though they may be seated in any of the parts mentioned above, they commonly appear upon the private parts, or the inside of the thigh. They are also less painful, but frequently much larger and harder, than primary chancres. This disorder is usually attended with a stranguary or obstruction of urine, a phymosis, &c. A stranguary may be occasioned either by a spasmodic constriction, or an inflammation of the urethra and parts about the neck of the bladder. In the former case, the patient begins to void his urine with tolerable ease; but, as soon as it touches the galled or inflamed urethra, a sudden constriction takes place, and the urine is avoided by spirits, and sometimes by drops only. When the stranguary is owing to an inflammation about the neck of the bladder, there is a constant heat and uneasiness of the part, a perpetual desire to make water, while the patient can only render a few drops, and a troublesome tenesmus, or constant inclination to go to stool. When the stranguary is owing to spasm, such medicines as tend to dilute and blunt the salts of the urine will be proper. For this purpose, besides the common diluting liquors,

liquors, soft and cooling emulsions, sweetened with the syrup of poppies, may be used. Should these not have the desired effect, bleeding, and emollient fomentations, will be necessary. When the complaint is evidently owing to an inflammation about the neck of the bladder, bleeding must be more liberally performed, and repeated according to the urgency of the symptoms. After bleeding, if the stranguary still continues, soft clysters, with a proper quantity of laudanum in them, may be administered, and emollient fomentations applied to the region of the bladder. At the same time, the patient may take every four hours a tea-cupful of barley-water, to an English pint of which six ounces of the syrup of marsh-mallows, four ounces of the oil of sweet almonds, and half an ounce of nitre, may be added. If these remedies should not relieve the complaint, and a total suppression of urine should come on, bleeding must be repeated, and the patient set in a warm bath up to the middle. It will be proper, in this case, to discontinue the diuretics, and to draw off the water with a catheter; but, as the patient is seldom able to bear its being introduced, we would rather recommend the use of mild bougies. These often lubricate the passage, and greatly facilitate the discharge of urine. Whenever they begin to stimulate or give any uneasiness, they may be withdrawn. The phymosis is such a constriction of the prepuce over the glans as hinders it from being drawn backwards; the paraphymosis, on the contrary, is such a constriction of the prepuce behind the glans as hinders it from being brought forwards. The treatment of these symptoms is so nearly the same with that of the virulent gonorrhœa, that we have no occasion to enlarge upon it. In general, bleeding, purging, poultices, and emollient fomentations, are sufficient. Should these, however, fail of removing the stricture, and the parts be threatened with a mortification, twenty or thirty grains of ipecacuanha, and one grain of emetic tartar, may be given for a vomit, and may be worked off with warm water or thin gruel. It sometimes happens, that, in spite of all endeavours to the contrary, the inflammation goes on, and symptoms of a beginning mortification appear. When this is the case, the prepuce must be scarified with a lancet, and, if necessary, divided, in order to prevent a strangulation, and set the imprisoned glans at liberty. We shall not describe the manner of performing this operation, as it ought always to be done by a surgeon. When a mortification has actually taken place, it will be necessary, besides performing the above operations, to foment the parts frequently with cloths wrung out of a strong decoction of camomile flowers and bark, and to give the patient a drachm of the bark in powder every two or three hours. With regard to the priapism, chordee, and other distortions of the *penis*, their treatment is no way different from that of the gonorrhœa. When they prove very troublesome, the patient may take a few drops of laudanum at night, especially after the operation of a purgative through the day.

OF A CONFIRMED LUES.

THE symptoms of a confirmed lues are, buboes in the groin, pains of the head and joints, which are peculiarly troublesome in the night, or when the patient is warm in bed; scabs and scurfs in various parts of the body, especially on the head, of a yellowish colour, resembling a honey-comb; corroding ulcers in various parts of the body, which generally begin about the throat, from whence they creep gradually, by the palate, towards the cartilage of the nose, which they destroy; excrescences or exostoses arise in the middle of the bones, and their spongy ends become brittle, and break upon the least accident; at other times, they are soft, and bend like wax; the conglobate glands become hard and callous, and form, in the neck, armpits, groin, and mesentery, hard moveable tumours, like the king's evil; tumours of different kinds are likewise formed in the lymphatic vessels, tendons, ligaments, and nerves, as the gummata, ganglia, nodes, tophi, &c. the eyes are affected with itching, pain, redness, and sometimes with total blindness, and the ears with a ringing noise, pain, and deafness, whilst their internal substance is exulcerated and rendered carious; at length all the animal, vital, and natural, functions, are depraved; the face becomes pale and livid; the body emaciated and unfit for motion, and the miserable patient falls into an atrophy or wasting consumption. Women have symptoms peculiar to the sex; as cancers of the breast, a suppression or overflowing of the menses, the whites, hysteric affections, an inflammation, abscess, scirrhus, gangrene, cancer, or ulcer, of the womb; they are generally either barren or subject to abortion; or, if they bring children into the world, they have an universal erysipelas, are half rotten, and covered with ulcers. Such is the catalogue of symptoms attending this dreadful disease in its confirmed state. Indeed they are seldom to be met with in the same person, or at the same time; so many of them, however, are generally present as are sufficient to alarm the patient; and, if he has reason to suspect the infection is lurking in his body, he ought immediately to set about the expulsion of it, otherwise the most tragical consequences will ensue. The only certain remedy hitherto known in Europe, for the cure of this disease, is mercury, which may be used in a great variety of forms, with nearly the same success. Some time ago it was reckoned impossible to cure a confirmed lues without a salivation; this method is now, however, pretty generally laid aside, and mercury is found to be as efficacious, or rather more so, in expelling the venereal poison, when administered in such a manner as not to run off by the salivary glands. The only chemical preparation of mercury which we shall take notice of is the corrosive sublimate. This was some time ago brought into use for the venereal disease in Germany, by the illustrious Baron Van Swieten; and was soon after

introduced into Britain by the learned Sir John Pringle, at that time physician to the army. The method of giving it is as follows: one grain of corrosive sublimate is dissolved in two ounces of French brandy or malt spirits; and of this solution, an ordinary table-spoonful, or the quantity of half an ounce, is to be taken twice a-day, and to be continued as long as any symptoms of the disorder remain. To those whose stomach cannot bear the solution, the sublimate may be given in form of pills. Several roots, woods, and barks, have been recommended for curing the venereal disease; but, though none of them, when administered alone, have been found, upon experience, to answer the high encomiums which have been bestowed upon them, yet, when joined with mercury, many of them are found to be very beneficial in promoting a cure. The best we know yet is sarsaparilla, and the mezereon-root, which are powerful assistants to the sublimate, or to any other mercurial. Those who chuse to use the mezereon by itself, may boil an ounce of the fresh bark, taken from the root, in twelve English pints of water to eight, adding towards the end an ounce of liquorice. The dose of this is the same as of the decoction of sarsaparilla. We have been told that the natives of America cure the venereal disease, in every stage, by a decoction of the root of a plant called the Lobelia. It is used either fresh or dried; but we have no certain accounts with regard to the proportion. Sometimes they mix other roots with it, as those of the ranunculus, the ceanothus, &c. but whether these are designed to disguise or assist it, is doubtful. The patient takes a large draught of the decoction early in the morning, and continues to use it for his ordinary drink through the day. Many other roots and woods are highly extolled for curing the venereal disease, as the roots of soap-wort, burdock, &c. as also the wood of guaiacum and sassafras; but, being particularly pointed out in the Herbal, we shall, for the sake of brevity, pass them over in this place, with only remarking, that, though we are still very much in the dark with regard to the method of curing this disease among the natives of America, yet it is well known, that they do cure it with speed, safety, and success, by the use of vegetables only, and that without the least knowledge of mercury. Hence it becomes an object of considerable importance to discover a method of cure in this island, by the use of vegetables only, by making trials of all the various plants which are found in it, and particularly such as Culpeper was known to make use of with such singular success, and which he has distinguished in the Herbal. Indeed there can be no doubt, but plants of our own growth, were proper pains taken to discover them, would be found as efficacious in curing the venereal disease here, as those of America there; for it must be remembered, that what will cure a patient of the venereal disease in one country will not have equal success if carried into another; a plain demonstration that every country produces that which is most congenial to the health of its own native inhabitants.

Mercury ought not to be administered to women in the menstrual flux, or when the period is near at hand. Neither should it be given in the last stage of pregnancy. If, however, the woman be not near the time of her delivery, and circumstances render it necessary, mercury may be given, but in smaller doses, and at greater intervals than usual: with these precautions, both the mother and child may be cured at the same time; if not, the disorder will at least be kept from growing worse, till the woman be brought to bed, and sufficiently recovered, when a more effectual method may be pursued, which, if she suckles her child, will, in all probability, be sufficient for the cure of both. Mercury ought always to be administered to infants with the greatest caution. Their tender condition unfits them for supporting a salivation, and makes it necessary to administer even the mildest preparations of mercury to them with a sparing hand. A similar conduct is recommended in the treatment of old persons, who have the misfortune to labour under a confirmed lues. No doubt the infirmities of age must render people less able to undergo the fatigues of a salivation; but this, as was formerly observed, is never necessary; besides, we have generally found, that mercury had much less effect upon very old persons than on those who were younger. The most proper seasons for entering upon a course of mercury, are the spring and autumn, when the air is of a moderate warmth; if the circumstances of the case, however, will not admit of delay, we must not defer the cure on account of the season, but must administer the mercury; taking care, at the same time, to keep the patient's chamber warmer or cooler, according as the season of the year requires. A proper regimen must be observed by such as are under a course of mercury. Inattention to this not only endangers the patient's life, but often also disappoints him of a cure. A much smaller quantity of mercury will be sufficient for the cure of a person who lives low, keeps warm, and avoids all manner of excess, than of one who cannot endure to put the smallest restraint upon his appetites: indeed it but rarely happens that such are thoroughly cured. There is hardly any thing of more importance, either for preventing or removing venereal infection, than cleanliness. By an early attention to this, the infection might often be prevented from entering the body; and, where it has already taken place, its effects may be greatly mitigated. The moment any person has reason to suspect that he has received the infection, he ought to wash the parts with water and spirits, sweet oil, or milk and water; a small quantity of the last may likewise be injected up the urethra, if it can be conveniently done. Let him pay a strict regard to cleanliness, abstain from spirituous liquors, and persevere in a few bottles of the Solar Tincture, which will effectually preserve the blood from infection, or expel the poison, if it has taken place, and will perform a radical and perfect cure in less than a month.

DISEASES OF WOMEN*.

IN all civilized nations, women have the management of domestic affairs; and it is very proper they should, as nature has made them less fit for the more active and laborious employments. This indulgence, however, is often carried too far; and females, instead of being benefited by it, are greatly injured, from the want of exercise and free air. To be satisfied of this, one need only compare the fresh and ruddy looks of a milk-maid with the pale complexion of those females whose whole time is spent within doors. Though nature has made an evident distinction between the male and female with regard to bodily strength and vigour, yet she certainly never meant, either that the one should be always without, or the other always within, doors. The confinement of females, besides hurting their figure and complexion, relaxes their solids, weakens their minds, and disorders all the functions of the body. Hence proceed obstructions, indigestion, flatulence, abortions, and the whole train of nervous disorders. These not only unfit women for being mothers and nurses, but often render them whimsical and ridiculous. A sound mind depends so much upon a healthy body, that, where the latter is wanting, the former is rarely to be found. Women who are chiefly employed without doors, in the different branches of husbandry, gardening, and the like, are almost as hardy as their husbands, and their children are likewise strong and healthy. But, as the bad effects of confinement and inactivity upon both sexes have been already shewn, we shall proceed to point out those circumstances in the structure and design of females, which subject them to peculiar diseases; the chief of which are, their monthly evacuations, pregnancy, child-bearing, &c.

OF THE MENSTRUAL DISCHARGE.

FEMALES generally begin to menstruate about the age of fifteen, and leave it off about fifty, which renders these two periods the most critical of their lives. About the first appearance of this discharge, the constitution undergoes a very considerable change, generally indeed for the better, though sometimes for the worse. The greatest care is therefore necessary, as the future health and happiness of the female depends, in a great measure, upon her conduct at this period. It is the duty of mothers, and those who are intrusted with the education of girls, to instruct them early in the conduct and management of themselves at this critical period of their lives. False modesty, inattention, and ignorance of what is beneficial or hurtful at

* For all the various diseases and infirmities peculiar to women, as well in marriage as in celibacy, and at the *turn of life*, the Author begs leave to recommend his LUNAR TINCTURE, which alone possesses all the virtues of the vegetable world, adapted to Female complaints, and is the very essence of all medicines hitherto discovered for preserving the health, spirits, and beauty, of the sex. It may be had at any shops that deal in patent medicines.

this time, are the sources of many diseases and misfortunes in life, which a few sensible lessons from an experienced matron might have prevented. Nor is care less necessary in the subsequent returns of this discharge. Taking improper food, violent affections of the mind, or catching cold at this period, is often sufficient to ruin the health, or to render the female ever after incapable of procreation. If a girl about this time of life be confined to the house, kept constantly sitting, and neither allowed to romp about, nor employed in any active business, which gives exercise to the whole body, she becomes weak, relaxed, and puny; her blood not being duly prepared, she looks pale and wan; her health, spirits, and vigour, decline, and she sinks into a valetudinary for life. Such is the fate of numbers of those unhappy females, who, either from too much indulgence, or their own narrow circumstances, are, at this critical period, denied the benefit of exercise and free air. A lazy indolent disposition proves likewise very hurtful to girls at this period. One seldom meets with complaints from obstructions amongst the more active and industrious part of the sex; whereas the indolent and lazy are seldom free from them. These are, in a manner, eat up by the *chlorosis*, or *green-sickness*, and other diseases of this nature. We would therefore recommend it to all who wish to escape these calamities, to avoid indolence and inactivity, as their greatest enemies, and to be as much abroad in the open air as possible. After the menses have once begun to flow, the greatest care should be taken to avoid every thing that may tend to obstruct them. Cold is extremely hurtful at this particular period. More of the sex date their disorders from colds, caught while they are out of order, than from all other causes. This ought surely to put them upon their guard, and to make them very circumspect in their conduct at such times. A degree of cold that will not in the least hurt them at another time, will, at this period, be sufficient to ruin their health and constitution; therefore, from whatever cause this flux is obstructed, except in the state of pregnancy, proper means should be immediately used to restore it. But the menstrual flux may be too great as well as too small. When this happens, the patient becomes weak, the colour pale, the appetite and digestion are bad, and œdematous swellings of the feet, dropries, and consumptions, often ensue. To restrain the flux, the patient should be kept quiet and easy both in body and mind. If it be very violent, she ought to lie in bed with her head low; to live upon a cool and slender diet, as veal or chicken-broths with bread; and to drink decoctions of nettle-roots, or the greater comfrey. If these be not sufficient to stop the flux, stronger astringents may be used, as Japan earth, allum, elixir of vitriol, the Peruvian bark, &c. Two drachms of allum and one of Japan earth may be pounded together, and divided into eight or nine doses, one of which may be taken three times a-day. Persons whose stomachs cannot bear the allum, may take two table-spoonfuls of the tincture of roses three or four times a-day, to each dose of which ten drops of laudanum

num may be added. If these should fail, half a drachm of the Peruvian bark, in powder, with ten drops of the elixir of vitriol, may be taken in a glass of red wine four times a-day. That period of life at which the menses cease to flow is likewise very critical to the sex. The stoppage of any customary evacuation, however small, is sufficient to disorder the whole frame, and often to destroy life itself. Hence it comes to pass, that so many women either fall into chronic disorders, or die, about this time. Such of them, however, as will persevere in taking the Lunar Tincture previous to the time their menses leave them, will become more healthy and hardy than they were before, and enjoy strength and vigour to a very great age.

OF THE GREEN-SICKNESS.

THE green-sickness is an obstruction in the womb-vessels of young females, under or about the time of their courses beginning to flow. It is attended with a viscidness of all the juices, a fallow, pale, or greenish, colour of the face, a difficulty of breathing, a sickness in the stomach at the sight of proper food, and an unnatural desire of feeding on such things as are accounted hurtful, and unfit for nourishment. It is also called by physicians the white fever, the love fever, the virgin's disease, and the white jaundice. It sometimes seems to proceed from an alteration of the fluids, about the time that the menses first begin to flow, or from the inaptitude of the vessels to perform those discharges which nature then calls for. It may also proceed from an obstruction in the bowels, or a sluggish languid motion of the blood, whether natural, or acquired by ease, indulgence, or want of exercise: and this latter, no doubt, is the case, when the distemper happens to very young girls, who are not capable of suffering an hysterical disorder. Finally, it may proceed from a longing desire after the enjoyment of some particular person; or, in general, from a violent inclination to exchange a single life for the state of matrimony; and, when this is the case, there is an universal dulness and disinclination to exercise, and the patient complains of a pressure or weight, chiefly about the reins and loins. Upon any brisk motion comes on a difficulty of breathing, and a tension and quick pulsation of the arteries in the temples, which seem to beat with great violence; also a heavy, and frequently a lasting, pain of the head, and palpitation of the heart. The pulse is quick and low, attended with a small feverishness, and a loss of the natural appetite; but chalk, coals, stones, clay, tobacco-pipes, and other things of like unwholesome nature, ought to be kept as much as possible out of the patient's way; for she generally has more inclination to these than to a proper diet. The green-sickness is seldom dangerous, though it often proves of long continuance; but when very violent, and too much neglected, proceeding from a suppression of the monthly courses, and attended with the whites, it may in time bring on weakneses, hard swellings,

and barrenness. When it happens some time before the menses ought to appear, and they break forth without obstruction, it is usually cured upon this eruption, without farther means. If the whites come after the green-sickness has been long fixed, it is held to be a bad sign; if before, and it happens upon the stoppage of the menstrual flux, it often proves critical: if the courses flow regularly during the distemper, it is accounted a good symptom, and there is no danger. To forward a cure, the patient ought to be placed in a thin and clear air, to drink tea, barley-water, and other attenuating liquors, warm, and made agreeable to the palate. Her food should be nourishing, but easy of digestion, and not such as may inflame. Moderate exercise every day, such as walking, riding, stirring about the house, is very serviceable, notwithstanding the difficulty and uneasiness that attend it, and the great antipathy of the patient to any sort of motion. Sleep ought to be moderate, and taken at a due distance from meals, not till an hour or two, at least, after supper. All passions of the mind, especially those of melancholy and despair, are highly prejudicial; if the disease, therefore, be found to proceed from a settled inclination after marriage, the parents of the patient should endeavour to provide her a suitable match, as the most effectual cure; or, if the desire be after a particular person, to let her have him at all events, if they approve her choice. But, if matrimony be not judged convenient for her, either on account of youth, or for any other reason, they must then have recourse to physical remedies, according to the following directions. If the patient be at all plethoric, that is, if her veins be well stored with blood, bleeding will be highly proper to begin the cure; and this is to be succeeded by proper purgatives. In some cases, especially when the patient is very young, a vomit is often successful, being exhibited before purgation. Those cathartics, that are either mixed along with alterative medicines, or given in such quantities as to make them act as alterants, or lie a considerable time in the body before they operate, are usually very efficacious, and in weakly constitutions preferable to other purgatives. The following will, in general, be found to perform a cure:---Take castor, saffron, myrrh, black hellebore-root, all in powder, each one drachm; gum ammoniac, one drachm and a half; salt of steel, four scruples; best aloes powdered, two drachms; oil of cinnamon, fifteen drops; syrup of the five roots, a sufficient quantity. Make ten pills out of every drachm, of which let five be taken every night, drinking after them briony-water, and penny-royal water, of each two ounces. These are excellent to warm and comfort the nerves, thin the blood and juices, and cause them to circulate freely. They must be continued regularly for ten or twelve days. And indeed all cathartics of this nature, that are intended to make an alteration in the whole animal system, which is often necessary in these cases, must have much more time to operate than those which are intended only to purge the

intestines. When the green-sickness proves obstinate, it is proper to have recourse to the cold-bath, and to the use of mineral waters : or, an infusion may be made in lime-water, with chips of guaiacum, saffraſas, faunders, a little gentian and angelica-root, winter-bark, and Roman wormwood ; to which add tincture of steel, a sufficient quantity in proportion to the other ingredients ; or infuse filings of steel with the woods and roots. This may be drunk instead of the chalybeat-waters, and will frequently answer the same purpose. Decoctions or other preparations of the Jesuits bark, with steel wine, and tinctures of black hellebore and cinnamon, being continued a considered time, are also very effectual in lax constitutions, and where the juices are viscid ; but, when the green-sickness is attended with the whites, nothing is so certain a cure as the Lunar Tincture.

OF THE FLUOR ALBUS, OR WHITES.

THIS disease may be caused by falls, sprains in the back, purging to excess, especially with mercurials, and when the body is weak and lax ; or it may be the effects of a venereal infection, which, though cured, leaves the glands and other vessels in a relaxed state, which is very difficult to repair. The whites come away sometimes in a large and sometimes in a small quantity ; and it is observable, that the running generally increases after violent exercise, and that it is in greatest plenty at about the middle of the time between the monthly periods : the matter often proves variable, being sometimes white mixed with yellow, and at others of a thin watery consistence, greenish, and inclining to black ; sharp, corrosive, of an ill smell, occasioning heat of urine, and now and then ulcers. It then causes great weakness, especially in the small of the back and the loins ; a pale colour in the face, faintness, loathing of food, indigestion, swelling of the legs, irregularity in the courses. Sometimes it degenerates into a consumption, or dropsy, and proves mortal : at others, it causes incurable barrenness. The urine, under this disorder, is generally viscid, thick, and slimy, and sometimes appears as if small threads were mixed with it : nor does it settle so freely as in other cases. It has usually been thought difficult to distinguish the whites from the venereal disease ; and some women, who have had bad husbands, have laboured under the latter for a long time together, imagining it all the while to be only the former : others have mistaken a running, occasioned by an ulcer in the womb, for that disease. Now, as it is highly necessary every woman should learn the symptoms by which these are known asunder, let it be observed, that, whenever the courses come down, the whites always cease, and do not trouble the patient again till the courses are over ; whereas a venereal running remains constantly upon the patient, appears and does not cease during the monthly discharges : it is also much less in quantity than the whites. As

to an ulcer in the womb, it is best known by the sharp and growing pains that it occasions in the womb, from the very beginning of the disease; whereas in the whites, though sometimes the humour be so sharp as to cause great pain, and even an ulcer, yet this is not till after they have continued long enough on the patient to be distinguished by their other symptoms. The matter that flows from an ulcer is also frequently bloody, which the whites never are. Maids of a weakly constitution are often afflicted with this distemper, as well as married women and widows; and indeed there are few of the fair sex, especially such as are any way sickly, but who have known it more or less, it being often occasioned by other diseases. For whatever disease renders the blood poor, foul, or viscous, and reduces a woman to a languid condition, is commonly succeeded by the whites, which, when they come in this manner, continue to weaken the body more and more, and are in great danger, without speedy remedy, of wearing away the patient, and making her a miserable victim to death. Let no woman, therefore, neglect this distemper, when she finds it on her, but endeavour to prevent its getting too much a-head. The diet, in the cure of this distemper, ought to be nourishing, and much the same with that prescribed in consumptions, consisting of broths, boiled with shavings of hartshorn, tormentile-root, bistort, comfrey, conserve of red roses, isinglass, red rose flowers, gum-arabic, nutmegs, mace, cinnamon, and other strengthening and agglutinating ingredients. Sago and jellies are also serviceable in this case, particularly that of hartshorn. Some drink every morning, with very good success, a quarter of an ounce of isinglass, dissolved in a pint of milk, and sweetened with sugar. Exercise should be moderate, and taken, as much as can be, in a warm and dry air; and the continuance of this for some time, with a milk diet, have been found prevalent, when other means, though the best that could be made use of, have failed. Bleeding ought here to be omitted, unless the person be plethoric, or her monthly courses are obstructed: for it is not proper to weaken her who is already too weak. Purgatives, however, are held to be proper, but without calomel, especially when the disease is in its infancy, and appears but in small quantity. But, when it is of long standing, and the matter which flows is thin, discoloured, and of an ill smell; if ulcers are apprehended in the *uterus*; if any venereal infection has preceded, and part of the virulence is still supposed to remain, mercurials and other medicines suited to virulent cases are undeniably proper: and the cure here differs little from the cure of the venereal disease itself, only the purges should not be too violent, nor the calomel given in too large doses. In such cases, however, a perseverance in the Solar and Lunar Tinctures alternately, as prescribed in the Treatises round each bottle, may be depended on as the most easy, safe, speedy, and elegant, cure.

OF WEAKNESSES CONTRACTED BEFORE MARRIAGE.

THERE are some disorders contracted by the fair sex, the cause and cure of which are of such a nature, that for several reasons, chiefly though shame, they are likely to conceal them, and therefore may suffer worse consequences than can here be described. To tell, in few words, what I mean by such diseases as are contracted, they are all such as the patient, by a criminal indulgence of her passions, has herself been instrumental in causing. For that many of the fair, especially in their younger years, have suffered much from a secret vice, by which they have endeavoured to procure themselves those pleasurable sensations which God has ordered to be the effects of a mutual commerce between the sexes, is a matter of late become too notorious to be doubted, and too dreadful in its consequences to be indulged in; I mean that abominable vice onanism, or secret venery. And certainly none of them can take it amiss if, for their advantage, I venture so far to expose this practice, as to remove the evil consequences of it; and to prevent, as much as possible, its continuance. The secret vice before-mentioned is chiefly a fault of the youth of both sexes; and nothing is of more importance to the preservation of human-kind in general than the endeavouring to prevent a practice that strikes at the very root of fecundity. Among the motives to this crime of self-abuse, the three following have, I think, with a great deal of justice, been assigned as the principal. First, ignorance of its nature and consequences. As to its nature, there is no express prohibition of it; and therefore, many may unhappily be induced to imagine, when either by ill example, their own lascivious inclinations, or any accidental cause, they have been betrayed into an acquaintance with the practice of it, that there can be no harm in procuring to themselves that sensation, which, in their present circumstances, they cannot otherwise acquire, without a manifest violation of the national laws, and the hazard of exposing themselves to shame and infamy. If it were not for this unfortunate mistake, we have little reason to imagine, that persons otherwise pious, and the most observant of what is seemly in other particulars, would be guilty of such an offence, both against religion and decency. The case of Onan, however whom God slew (see Genesis, ch. xxxviii. ver. 9.) for thus wickedly defeating the purposes of generation, may answer the end of a precept, and witness the divine detestation of this-kind of uncleanness. Nor is this example less applicable to women than it is to men, since we shall shew in the following instances that they are as capable to render themselves unapt, by similar practices, for the business of procreation. And as to its consequences, they are no less fatal to this sex than to the other, as will be abundantly shewn in the same instances. The secrecy with which this crime may be committed is a second inducement to it. There must be another party in all other acts of uncleanness; but in this, there is neither partaker

nor witnesses. And this, above all other motives, seems to have been the most dangerous to women in particular, who are naturally more bashful than men, and whom custom has precluded from making any advances towards a mutual commerce with the other sex. Thirdly, there is no specific punishment to deter from this practice; but every one, who will, commits it with impunity. Adultery, in many countries, is punished with death: and with us, it subjects a man to pecuniary fines, and inflicts eternal infamy on the woman who is known to be guilty of it. Even fornication, though regarded with less severity, is yet most scandalous to the fair sex in particular; especially when they bring into the world, as the fruit of it, a living witness of their crime. But for self-abuse there is no infliction, no other punishment, but self-consciousness. And indeed, how can there be any other? The very nature of it, which renders it secure against detection, would frustrate any provision that could be made in this case by the legislature. And, besides this security from legal animadversion, it is safe from the consequence which single women must fear in their commerce with men, that of becoming pregnant. I might add, that some give into this way out of caution. They are loth to trust their fortunes and prerogatives in the hands of a man, and therefore will not marry; and, as to unlawful embraces, they dare not venture on them for many reasons. But I proceed to shew, that there can be no excuse for a practice, which, besides its wickedness is the most prejudicial that can be to the human constitution. Its bad effects on the body are many and great. If practised often, it relaxes and spoils the retentive faculty. It occasions the whites in women, and gleans in men. It ruins the complexion, and makes them pale, swarthy, and haggard. It produces a long train of hysteric disorders; and sometimes, by draining away the radical moisture, induces consumptions. It brings on heats in the privities, belly, thighs, with shooting pains in the head, and all over the body. It sometimes brings on that fatal malady, a furor uterinus, or, insatiable appetite to venery. But what it is most liable to produce is barrenness, by causing an indifference to the pleasures of Venus, and in time, a total inability or inaptitude to the act of generation itself. Virgins, who indulge themselves over-eagerly in this abuse of their bodies, deflower themselves, and destroy the valuable badge of their chastity, which it is expected they should not part with before marriage; but which, when lost, can never be retrieved. With regard to maids, who have hereby deprived themselves of that sacred badge, the loss of which before marriage, was so severely punished among the Jews, under what apprehensions must they continually lie!--with what terrors must they approach the marriage-bed, which heaven has designed for the seat of the highest sensible enjoyment! when they reflect that their virtue, on the first amorous encounter, is liable to such suspicions as may never be worn off, but which may render uncomfortable the whole life, both of her and her otherwise affectionate husband! But, besides this disgrace, suppose women have actually entered with reputation in all other respects on the conjugal

conjugal state, how must it grieve them, when they find the ends of it unanswered, and have room to charge their inaptitude to procreation on their own fault ! Both husband and wife, perhaps, may be passionately desirous of issue ; and the good man may think it a defect in himself, that their nuptial embraces are perpetually fruitless. But, where a woman can charge herself with such a course of self-abuse, as hath sensibly weakened and debilitated her organs of generation, hath she not all the room in the word to be for ever unhappy, in the remembrance of her folly and wickedness ; and to believe, with justice, that another woman in her case would not be infertile ? How much more tormenting must it be, if, besides her having rendered ineffectual the use of the marriage-bed, she feels in herself no inclination to the enjoyment of it, and is thereby not only insensible, as to her own particular, but makes imperfect to her husband that exquisite pleasure which ought to result from their mutual embraces ! Supposing neither of the aforesaid calamities to befall her, but that she is capable of bringing forth heirs to her husband ; yet, if she is conscious of having weakened her body, and brought on herself a miserable train of pains and infirmities, what anxiety, what remorse, must not a woman endure on that account ! Every guilty female, who finds in herself any of the dismal symptoms here enumerated, will not readily forget what sensibly affects her ; nor will she easily forgive herself those unnatural fallies, whose fatal consequences rest heavily upon her, and abridge her of half those enjoyments, which her sex, her constitution, and the various benefits of nature, had made her capable of partaking. What I have already said, if duly attended to, will be sufficient to render this practice detestable ; to deter the young, and hitherto innocent, from making themselves miserable, and to stop the course of those who have already advanced far in the road to destruction. A sudden and resolute stand, to all old offenders, is what I would in the first place seriously advise, as the most essential step towards restoring to themselves a sound constitution, and that peace of mind, which they cannot otherwise enjoy. There are few cases so bad, but what, if taken in any reasonable time, a due regimen, and the use of the Solar and Lunar Tinctures, may be effectual in the relief of. Let the guilty resolve then, that they will do so no more. Let them, as much as possible, abstain from every thought, but especially from every action, that may raise irregular desires. Let them, when any way tempted, reflect on the miserable condition of many, who, in galloping consumptions, have died terrible examples to all those who persist in this vice. As the most usual complaints of those who have been guilty of this practice regard the weakness and infertility of the genitals, they must have recourse to the Solar Tincture alone, which, from its warm and stimulating action on the muscular system, will reanimate the parts, quicken the circulation, invigorate the nerves, and renovate the whole body, how much soever it might be debilitated, relaxed, and weakened.

OF THE FUROR UTERINUS.

THE *furor uterinus* is such a particular complication of hysterical symptoms, from an extraordinary fulness or inflammation of the vessels of the womb, as forms a sort of madness, wherein the patient is preternaturally disposed, or involuntarily excited, as it were, to venereal embraces. It is a distemper not very frequent, but which sometimes happens. The signs of it are very manifest, both by the gestures of the body and the tendency of the patient's discourse; which, how great soever her natural modesty may be, will be extravagantly lewd. The causes of this disease are usually the same with those of other hysterical disorders; but, by falling on the organs of generation, are more violent in their effects. A vigorous, healthy, and sanguine, constitution, high feeding, want of exercise, or a mixed conversation, may dispose to it: as may also too large a dose of cantharides, and other provocative medicines; or indulging vehement desires, and too great familiarity, but short of enjoyment, with the other sex. Some time before the fit, the patient often appears silent and sorrowful, with a bashful, down-cast, look, and an unusual flushing all over the face. Her pulse is irregular, varying from high and strong to low and weak, and then with long intervals, heaving it out, as it were, with a sigh. These symptoms increase gradually, till the fit actually comes on: then the patient bursts out into a fit of crying; when the tears are plentifully shed, if a man comes in her way, she is apt to lay hold of him, and treat him with indecent fondness. In fine, those who labour under this disorder appear to be mad by intervals, and say and do a thousand things which they are unconscious of when the fit is over. If the symptoms are violent, the fit frequent and of long continuance, and especially if the patient be of a sanguine constitution, unmarried, and the case originally proceeds from a fixed amour, it is difficult of cure, and sometimes degenerates into a continued madness. But, if the distemper proceeds from an obstruction or suppression of the monthly courses, from too great a quantity of blood, or from a too indulgent life, it is more easily remedied. The person thus afflicted should be removed into a clear and open air, if she be not in such already; and, if she be, a change perhaps may be of service. Her diet should be thin and cooling, and not taken in large quantities: her exercise, between the fits, moderate. Let her be kept, as much as possible, from the company of men; and especially, if love be the suspected cause, from that man whom she is known to regard, unless it be to bring them entirely together, and cure the disease by removing its origin. During the fit, bleed directly, and that in a considerable quantity, especially if any evacuations have been suppressed; afterwards exhibit the following opiate: take black-cherry water and
white

white-wine vinegar, of each one ounce; camphire half a scruple; white sugar, two ounces; liquid laudanum, forty drops: mix them well, for a single draught: also, take spring-water, twelve ounces; lemon-juice and white-wine vinegar, of each one ounce and an half; white sugar, a sufficient quantity to make it palatable: mix them well, and let her use it for common drink. Take milk, half a pint; tincture of asafœtida, two ounces; camphire, sugar of lead, and troches of myrrh, of each two drachms: mix them, and inject cold into the privities, with a proper instrument. If these fail of success, repeat the opiate; and, if the fit still increase, let the patient be had to the cold bath. Blistering also has been found serviceable in some women. A whey diet, together with the use of the cold-bath continued for a month or two, are excellent; and during all this time, clysters and injections may be used between whiles, made according to the form above, without any mixture of more stimulating ingredients. When this disease degenerates into a madness, it must be treated accordingly, and the best advice should be immediately had; for, if it remains long in a confirmed state, it will seldom admit of a cure.

OF CONCEPTION, OR PREGNANCY.

WHEN almighty God created the world, he so ordered and disposed of the *matrices mundi*, that every thing produced from it should continue so long as the world should stand. Not that the same individual species should always remain; for they were in process of time to perish, decay, and return to the earth from whence they came; but that every like should produce its like, every species produce its own kind, to prevent a final destruction of the species, or the necessity of a new creation. For which end he laid down certain regulations, by which each species was to be propagated, preserved, and supported, till, in order and course of time, they were to be removed hence: for without that, those very beings, which were created at first, must have continued to a final dissolution of all things; which almighty God, of his infinite wisdom, did not think fit. But, that he might still the more manifest his omnipotence, he set all the engines of his providence to work, by which one effect was to produce another, by means of certain laws or rules, laid down for the propagation, maintenance, and support, of all created beings. This his divine providence is called nature, and these regulations are called the laws of nature, by which it ever operates in its ordinary course, producing conception and generation of all things, as it were, from the beginning.

The process of generation of the human species, so far as the male contributes to it, is as follows: the penis being erected by an affusion of blood; the glands at the same time tumefied; and the nervous papillæ in the glands much rubbed, and highly excited, in coition; an ejaculatory contraction follows, by which the seed is pressed

out of the feminal vesicles, and expelled with some considerable force. The process of generation on the part of the female is thus: the clitoris being erected, after the like manner as the penis in man; and the neighbouring parts all distended with blood; they more adequately embrace the penis in coition: and, by the intumescence, press out a liquor from the glands about the neck of the womb, to facilitate the passage of the penis. At the same time, the fibres of the womb, contracting, open its mouth (which at other times is extremely close) for the reception of the finer part of the seed.

From this contact of the sexes, follows *conception*, or the production of an *embryo*, which is effected in the following manner: In the superficies of the testicles or ovaries of women, there are found little pellucid spherules, consisting of two concentric membranes, filled with a lymphatic humour, and connected to the surface of the ovaria, underneath the tegument, by a thick calix, contiguous to the extremities of the minute ramifications of the Fallopian tubes. These spherules, by the use of venery, grow, swell, raise, and dilate, the membranes of the ovary into the form of papillæ; till, the head propending from the stalk, it is at length separated from it; leaving it a hollow cicatrix, in the broken membrane of the ovary; which, however, soon grows up again. Now, in these spherules, while still adhering to the ovary, fœtuses have been frequently found: whence it appears, that these are a kind of ova, or eggs, deriving their structure from the vessels of the ovary, and their liquor from the humours prepared therein. Hence, also, it appears, that the Fallopian tubes being swelled, and stiffened by the act of venery, with their muscular fimbriæ, like fingers, may embrace the ovaries, compress them, and by that compression expand their own mouths: and thus the eggs, now mature, and detached as before, may be forced into their cavities; and thence conveyed into the cavity of the uterus; where they may either be cherished and retained, as when they meet with the male seed; or, if they want that, again expelled. Hence the phænomena of false conceptions, abortions, fœtuses found in the cavity of the abdomen, the Fallopian tubes, &c. For, in coition, the male seed, abounding with living animalcules, agitated with a great force, a brisk heat, and, probably, with a great quantity of animal spirits, is violently impelled through the mouth of the uterus, which on this occasion are laxer than ordinary, into the uterus itself; which now, in like manner, becomes more active, turgid, hot, inflamed, and moistened with the flux of its lymph and spirits, by means of the titillation excited in the nervous papillæ by the attrition against the rugæ of the vagina. The semen thus disposed in the uterus, is retained, heated, and agitated, by the convulsive constriction of the uterus itself; till, meeting with the ova, the finest and most animated part enters through the dilated

lated pores of the membranula of the ovum, now become glandulous, is there retained, nourished, dilated, grows to its umbilicus, or navel; stifles the other less lively animalcules; and thus is conception effected.

The egg in the ovarium of a woman, when impregnated with the male seed, may be compared to the small round white spot of the size of a small pea on the yolk of an hen's egg; in which small part, if it is impregnated, the chicken begins to form, and which is commonly called the tread; though this part is always to be found in the eggs of those hens that have not cohabited with the cock, but smaller, and these, not having received the male seed, produce no chickens. Therefore since an egg is so nearly compleated in a hen, without communication with a cock, and since there are parts in a woman equally adapted for this purpose; it may be presumed, that the unimpregnated egg of a woman, when it proceeds from the ovarium, consists of those parts which are the rudiments of the foetal part of the placenta, and membranes; and most likely, a part, at least, of the rudiments of the child itself; and may be called the ovarial portion, which when impregnated by the addition of the male seed, and afterwards conveyed into the womb, acquires a further addition from the womb itself; which may be called the uteral portion; but, if not impregnated, it is discharged from the womb, without any further growth. The first thing that appears of a foetus, is the placenta, like a little cloud, on one side of the external coat of the egg: about the same time the spine is grown big enough to be visible; and a little after the cerebrum and cerebellum appear like two small bladders: next, the eyes stand prominent in the head: then the punctum saliens, or pulsation of the heart, is plainly seen. The extremities discover themselves last of all. The formation of the bones in a foetus is very gradual and regularly performed. In the first two months there is nothing of a bony nature in the whole; after this, the hardness of the parts where the principal bones are to be situated becomes by degrees perceptible. Dr. Kerkring describes the progress of the ossification from skeletons which he had prepared from foetuses of two months, and thence up to nine. In the first two months, or till the end of that time, there appears not any thing bony; after this, in the third and fourth months, and so on, the several parts, one after another, acquire their bony nature. In the first stages every thing is membranous, where the bones are to be; these by degrees transmigrate into cartilages; and from these, by the same sort of change continued, the bones themselves are by degrees formed. All this is done by nature, by such slow, though such certain, progressions, that the nicest eye can never see it doing, though it easily sees it when done.

Though the state of pregnancy is not a disease, yet it is attended with a variety of complaints which merit great attention, and often require the assistance of medicine:

Some

Some women indeed are more healthy during their pregnancy than at any other time; but this is by no means the general case: most of them breed in sorrow, and are frequently indisposed during the whole time of pregnancy. Few fatal diseases, however, happen during that period; and hardly any, except abortion, that can be called dangerous. Every pregnant woman is more or less in danger of abortion. This should be guarded against with the greatest care, as it not only weakens the constitution, but renders the woman liable to the same misfortune afterwards. Abortion may happen at any period of pregnancy, but it is most common in the second or third month. Sometimes, however, it happens in the fourth or fifth. If it happens with the first month, it is usually called a false conception; if after the seventh month, the child may often be kept alive by proper care. The common causes of abortion are, the death of the child; weakness or relaxation of the mother; great evacuations; violent exercise; jumping, or stepping from an eminence; vomiting, coughing, convulsion-fits, strokes on the belly, falls, fevers, disagreeable smells, excess of blood, indolence, high living, or the contrary, violent passions or affections of the mind, as fear, grief, &c. When any signs of abortion appear, the woman ought to be laid in bed on a mattress, with her head low. She should be kept quiet, and her mind soothed and comforted. She ought not to be kept too hot, nor to take any thing of a heating nature. Her food should consist of broths, rice and milk, jellies, gruels made of oat-meal, and the like, all of which ought to be taken cold. If she be able to bear it, she should lose, at least, half a pound of blood from the arm. Her drink ought to be barley-water, sharpened with juice of lemon; or she may take half a drachm of powdered nitre, in a cup of water-gruel, every five or six hours. If the woman be seized with a violent looseness, she ought to drink the decoction of calcined hartshorn prepared. If she be affected with vomiting, let her take frequently forty drops of the Lunar Tincture in a wine-glass of cold spring water. In general, opiates are of service, but they should always be given with caution. Sanguine robust women, who are liable to miscarry at a certain time of pregnancy, ought always to be bled a few days before that period arrives. By this means, and persevering in the Lunar Tincture, they might always escape that misfortune.

OF CHILD-BIRTH.

THOUGH the management of women in child-bed has been practised as an employment since the earliest accounts of time, yet it is still, in most countries, on a very bad footing. Few women think of following this employment till they be reduced to the necessity of doing it for bread. Hence not one in a hundred of them have any education, or proper knowledge of their business. It is true, that nature, if left to herself, will generally expel the foetus; but it is equally true, that most women

women in child-bed require to be managed with skill and attention, and that they are often hurt by the superstitious prejudices of ignorant and officious midwives. The mischief done in this way is much greater than is generally imagined; most of which might be prevented by allowing no women to practise midwifery but such as are properly qualified. Were due attention paid to this, it would not only be the means of saving many lives, but would prevent the necessity of employing men in this indelicate and disagreeable branch of medicine, which is, on many accounts, more proper for the other sex. In order to obtain a perfect idea of the process of delivery, and to form a competent knowledge of difficult child-births, it is necessary we should first understand those that are natural. The time of the natural birth is from the 15th day of the ninth month to the end of the 30th of the same: yet some women affirm it may be sooner or later. Hoffman says, the usual time is nine solar months; and Junker, that, excretions from the uterus being by women referred to certain lunar phases, they reckon their going with child by the weeks, and that they usually exclude the foetus forty weeks from the time of their being with child, commonly on that very day they were used to have their menses. When this time is arrived, which may be known by a remarkable descent of the womb, and a subsidence of the belly, the foetus is mature for delivery; it then turns round, and its head falls towards the orifice of the womb, as in the annexed plate, where A A denotes the portion of the chorion dissected and removed from its proper place; B, a portion of the amnios; C C the membrane of the womb dissected; D D the placenta endued with many small vessels by which the infant receives its nourishment; E E the varication of the vessels which makes up the navel string; F F the navel string, by which the umbilical vessels are carried from the placenta into the navel; G G the infant as it lieth perfect in the womb ready for delivery; H the insertion of the umbilic vessels into the navel of the infant. The orifice of the womb dilates by the weight and pressure of the child; and the chorion and amnios, being driven forward with the waters they contain, form a kind of pouch or bladder, at the said orifice; which should be suffered to break of itself, or, at least, it should not be burst till the woman is in labour. There is a flux of whitish matter from the said orifice: pains which extend from the loins and groin towards the genital parts: there is a frequent desire to make water, or to go to stool; or a continual tenesmus: a flux of the waters from the membranes which contain the child immediately before the birth, or more early: a trembling of the lower joints: sometimes the head aches, and the face looks intensely red. In this state of things, the midwife ought to examine the state of the uterus, and relax the vagina by some oily and mollifying remedy, which ought to be kept in readiness; she should likewise examine by the touch, with the fore and middle fingers, introducing them from time to time into

the orifice of the womb, to discern whether it be dilated, contracted, or in an oblique or straight direction; from whence a judgment may be formed whether it will come easily, or difficultly, &c. as represented in No. 1. of the annexed plate, where A denotes the uterus; B B the vagina laid open; C C the os uteri internum, as yet contracted, but in its right situation; D represents the manner of examining the os uteri with one or more of the fingers, which if obliquely situated either forwards toward the os pubis, backwards on the os sacrum, or towards either side, denotes a difficult delivery. As the infant gradually advances, the above-mentioned protuberance continually enlarges the passage, till the crown of the head may be felt; the birth is then said to be advanced one third, and the midwife may now assist the expulsion. When the infant is advanced forward as far as his ears, he is said to be in the passage, as shewn in No. 2. of the annexed plate, which represents the natural posture of the infant in the birth, with its head protruding into the os uteri, under the arch of the os pubis: A the infant, B B the womb laid open, C C the ossa pubis, D D the ossa ischii, E E the ossa ilei, F the navel-string, G the secundines adhering to the womb. If the membranes are not already burst, they may now be opened, and the waters, by their effusion, will render the vagina slippery, and promote the expulsion of the infant. When the child is born, the midwife should lay it on her knees so as to give issue to the waters from the mouth, if any has been imbibed: soon after, the placenta appears of itself, if not attached to the uterus: if otherwise, the midwife must separate it gently, by introducing her hand. The navel-string must now be cut, having first made a ligature as well on the child's side as on the mother's to prevent an hæmorrhage. After the child is born, and the after-birth brought away, let a warm linen cloth be applied to the parts, but not so as to hinder the flowing of the lochia. An hour after, let the mother take a little oil of sweet almonds, to ease the after-pains, and let a cataplasm of the oil of sweet almonds two ounces and two or three new-laid eggs be boiled together, and laid to the parts, renewing it every six hours, for two days: fifteen days after the birth, the parts may be bathed with an astringent decoction of red roses, balauftines, or nutgalls, in red wine, in order to brace them. If the labour is long and difficult, it will be proper to bleed, to prevent inflammations, and to give a little Alicant-wine, with the addition of cinnamon-water, or confectio alkermes.

A difficult delivery is sometimes brought on by the mother, the midwife, or the fœtus. The fault is in the mother, if, when the orifice of the womb is open, and the child rightly placed, she has not strength to expel the fœtus, especially if the waters are come away, and the pains cease; or when the mother will not exert herself; or there is a natural fault in the genital parts. In a defect of strength, or pains all else being right, a draught of generous wine should be given, with cinnamon and mace,

again and again, if the work does not go forward. If there wants a greater stimulus, borax, cinnamon, or myrrh, may be given, with a proper drink, which must be repeated in an hour or two, if occasion requires. But the abuse of forcing medicines is dangerous: stimulating clysters may be injected now and then, especially if the woman is costive. The midwife should also press back the os coccygis, which tends to excite the pains, and to ease the labour. If the parts are over strait, as in the first birth, especially if the woman is not young, emollient liniments are to be used, and the parts must be anointed with fresh butter, or oil, and to be dilated gently with the fingers. If there is a tumour, caruncle, or membrane, opposing the birth, a surgeon's assistance is required. The midwife is in fault, when she hastens the labour before the time, when there are no true pains, when the orifice of the uterus is not open, which alone distinguishes the true pains from false: the true time of birth must be waited for: the woman must be composed, and her spirits kept up with comfortable liquors. If the fault is with the foetus, and the head too large, or the shape monstrous, or the situation preternatural, then forcing medicines are fruitless and noxious; and the foetus must be brought forth by the feet, by a skilful hand, or the instrument called embryulus, as in No. 9. of the annexed plate, whether alive or dead. If the feet present first, as in No. 3. the midwife must be wary, lest there be twins, and lest she should take a foot of each: the feet must be wrapped in a dry napkin, and the child must be drawn gently, till the waste is in the orifice of the uterus: then the infant's hands should be drawn close by the sides; and if the nose be towards the os pubis, it should be turned towards the coccyx, to prevent an obstacle. Then, the orifice must be dilated with the fingers, and the woman's throws should assist the midwife's efforts to educe the child. If the chin is embarrassed, the midwife must disengage it, by putting her finger into the mouth, in order to turn it to advantage. If the infant's head presents across, as in No. 4. it must be put back, and gently turned to its natural situation; and if the shoulder or back presents, as in No. 5. and 6. the same art must be used. If the belly, hip, or thigh, appears first, as in No. 7. and 8. the child must be extracted by the feet, and the mother must lie horizontally on her back. If one or both hands are directed upwards, and lie close to the head, the case is not so bad as some apprehend, for they will keep the orifice dilated, till the head passes, and prevents strangling. If one leg, or the feet and hands, appear, they must be returned, and the infant brought forth by the feet, as in No. 10. and 11. If the infant is dead, there is generally a collapion of the abdomen; the breasts are flaccid; the infant bears on the lower part of the pelvis: and the child, upon motion, rolls like a lump of lead. The bones of the skull are wrapped over one another; an ichorous synphatic sanies flows from the uterus; the mother is subject to fainting. There is no pulsation in the navel string; it is

soft

soft and indolent to the touch, and absolutely deprived of motion. If the placenta comes first, and is hot, the child is alive. Above all, if any part of the infant's body appears, and is full of small vesicles livid, soft, and brittle, it is not only dead, but beginning to putrify. In these cases it must be extracted by the feet, and if it cannot be done otherwise, with an instrument; but a man-midwife's assistance must not be neglected. When the *foetus* dies before the time of birth, and the membranes continue whole, it will not putrify; therefore the work must be left to nature, for birth-pains will at length come on spontaneously. If the navel-string appears first, and is compressed soon after by the head of the infant, its life is in danger, and the remedy is to return the infant, and reduce the cord, till the head fills the orifice; but, if this cannot be done, the woman must be put in a suitable posture, and the child must be extracted by the feet. When the placenta presents itself, which is known by its spongy, soft, texture, and the great quantity of blood flowing at the same time, it requires speedy assistance. If the membranes are entire, they should be broken; the placenta and membranes should be reduced into the uterus, and the child be extracted by the feet; which is more easily performed in the membranes than in the uterus, and put into a proper situation: but, if the placenta is disengaged from its membranes, and these are broke, and the placenta, or both, appear before the infant, they may be brought away first, and the infant immediately afterwards. When there is a great flux of blood from outward accidents, the infant should be immediately delivered by art, though the mother is not in true labour. If the uterus is opened, and the vagina relaxed, as in this case they commonly are, the child must be extracted by the feet; if not, they must be mollified with fresh oil, and the infant delivered as before. After all laborious births, the woman is generally weak, and apt to faint: therefore, her spirits should be kept up by a glass of hot wine, or analeptic water, which must be repeated as oft as there is occasion. If, after the child is born, the placenta does not soon follow, and it adheres to the womb, the woman is not to change her posture immediately, but the midwife's hand is to be introduced into the womb, as far as the placenta, taking the navel-string for a guide; and, taking hold of it, she is to move it gently to and fro, in order to loosen and extract it. If it adheres too closely, it is not to be pulled forcibly, or broken: it will be best to wait half an hour, keeping the hand in the uterus, for fear of its closing, till it comes away of itself, or may be separated without force, as in No. 12, which exhibits the method of separating and extracting the placenta from the womb, when it does not easily follow the infant. There the navel-string A A is held by the left hand B, while the right hand D is thereby guided in the collapsed uterus C C to the placenta E, which is hereby separated from the uterus. If, through the unskilfulness of the midwife, the orifice of the womb closes, before it is come away,

away, aloetic pills must be taken every evening. If it putrifies, the patient dies, or falls into dangerous fevers. After delivery, the woman should be put into bed, and a folded sheet put under her hips, in order to receive the lochia. Warm linen should be applied to the genital parts, to keep out the air, and a compress, dipped in warm wine, should be applied to the belly, but not too tight. If there are violent pains after delivery, they generally proceed from the after-birth's being retained, or part of it; from blood clotted, or concreted, in the uterus; from hard labour; from a defect in the flux of the lochia; or from wind, especially if the woman has not been swathed in a proper way. In this case, hot diluents are proper, or an infusion of camomile flowers, drunk as tea, or broths with carraway-seeds; or wormwood, or thin orange-peel one-ounce, or a bitter tincture in a proper infusion, taken hot. An ounce or two of oil of sweet almonds, taken in a hot vehicle, is also excellent.

If violent pains continue after delivery of the child, so as to give suspicion of more being left behind, the greatest care and circumspection should be used in examining the state of the uterus, and watching an opportunity to extract them in those favourable moments when the efforts of nature and the mother's throws mutually conspire to promote the birth; and in which the utmost skill and caution is requisite, or both mother and offspring are liable to perish. These cases, when they happen, are generally attended with the more difficulty from the midwife not knowing the usual position of a plural conception. I have therefore given the annexed plate of a recent case, where three children were safely delivered, who, with the mother, are all in a fair way of doing well.

The most fatal disorder consequent upon delivery is the *puerperal* or child-bed fever; and there is not any disease that requires to be treated with more skill and attention than this; consequently the best assistance ought always to be obtained as soon as possible. In women of plethoric constitutions, bleeding will generally be proper at the beginning; it ought however to be used with caution, and not to be repeated unless where the signs of inflammation rise high; in which case it will also be necessary to apply a blister to the region of the womb. During the rigour, or cold fit, proper means should be used to abate its violence, and shorten its duration. For this purpose the patient may drink freely of warm diluting liquors, and, if low, may take now and then a cup of white-wine-why; warm applications to the extremities, as heated bricks, bottles or bladders filled with warm water, and such-like, may also be used with advantage. Emollient clysters of milk and water, or of chicken water, ought to be frequently administered through the course of the disease. These prove beneficial by promoting a discharge from the intestines, and also by acting as a kindly fomentation to the womb and parts adjacent. Great care however is requisite in giving them, on account of the tenderness of the parts in

the pelvis at this time. The medicine always found to succeed best in this disease is the Lunar Tincture. This, if frequently repeated, will often put a stop to the vomiting, and at the same time lessen the violence of the fever. If it runs off by stool, or if the patient be restless, a few drops of laudanum, or some syrup of poppies, may occasionally be added. To avoid this fever, every woman in child-bed ought to be kept perfectly easy; her food should be light and simple, and her bed-chamber cool, and properly ventilated. There is not any thing more hurtful to a woman in this situation than being kept too warm. She ought not to have her body bound too tight, nor to rise too soon from bed, after delivery; catching cold is also to be avoided; and a proper attention should be paid to cleanliness. To prevent the milk-fever, the breasts ought to be frequently drawn; and, if they are full previous to the onset of a fever, they should, upon its first appearance, be drawn, to prevent the milk from becoming acrid, and its being absorbed in this state.

DISEASES OF INFANTS.

IT is proper, immediately after children are born, to search narrowly whether they have received any injury, either in the womb or in the delivery itself. Bruises in the head, or elsewhere, occasioned by the rough treatment of the midwife; and swellings, occasioned by a pressure against the internal orifice, may be cured or dissolved by the following mixture: take camphorated spirit of wine and oil of sweet almonds, of each two drachms; compound spirit of lavender, half a drachm: mix. Let the injured part be frequently anointed therewith. It may also be now and then fomented with warm milk. But, if the swelling tends to suppuration, it ought to be immediately forwarded with mucilage plaister, diachylon with gum, or a poultice of bread and milk. And after the discharge of matter, use Arcæus's liniment, warm, and mixed with a little Peruvian balsam, for the dressings, covering them with a simple diachylon plaister.

The *gripes* in children sometimes prove so violent, as to throw them into universal convulsions, or to cause what is called a convulsion of the bowels. When the diet is suspected to cause this disorder, it is usual to boil carraway-seeds and laurel-leaves along with the panada, or to mix with it a little wine or brandy. If the meconium has not been duly purged away, five grains of rhubarb should be given twice a-week, till the bowels are evacuated; or a little oil of sweet almonds, and syrup of violets, where the infant is weak. When the taking in too much milk is suspected to be the cause, let it be debarred the breast a short time, and in the mean while exhibit the following mixture: take syrup of peach blossoms and rhubarb, of each half an ounce; of anniseed, two drops: mix. Let a small spoonful of this be given occasionally, while the symptoms last. When the curdling of the milk
causes.

causes the gripes, proceed as follows: take rhubarb powdered fine, and magnesia alba, of each ten grains; oil of anniseed, one drop: mix. Give half this for a purge, in a spoonful of the mother's milk, and repeat the dose two or three times if there be occasion. When worms are the cause of the gripes, the readiest way to remove them is by giving Æthiop's mineral and rhubarb mixed in equal quantities, about five grains at a time, twice a-day. If wind be the cause, the belly of the child may be anointed with a mixture of two parts oil of sweet almonds and one part French brandy; wrapping the part up warm afterwards with a flannel.

The symptoms of cutting teeth generally begin about the fifth or sixth month, at which time some of the fore teeth rise, and occasion great pain, or even convulsions. Children have then commonly an itching, heat, pain, and swelling, in the gums; their spittle riseth much; they are restless and feverish, sometimes loose, and sometimes costive. A few days before any tooth is cut, the gum immediately above it appears thin and whitish, its sides being swelled and inflamed. Children of gross habit, and who breed their teeth with costiveness, are generally in most danger. The following mixture, given occasionally, will mitigate the pain, during the cutting of teeth: take black cherry water, two ounces; compound piony water, two drachms; confection of kermes, two scruples; Sydenham's liquid laudanum, fifteen drops: mix. Let one spoonful be given at a time, when the child is very restless.

Those little ulcerous eruptions in the mouth called the thrush, which sometimes appear early, and sometimes not till the third or fourth year, are accounted dangerous when joined with a fever, and are always troublesome. The child here should be kept moderately cool, as in a common fever, and a small blister may be applied to the neck, if the disorder be great. In the mean time use the following julep: take black cherry water, four ounces; treacle water, one ounce; lemon juice, six drachms; spirit of sweet nitre and spt. volatile oleosum, of each fifteen drops: mix. Give a spoonful or two every third or fourth hour; and let the ulcers in the mouth be cleansed with the following gargle: take barley decoction, three ounces; best vinegar, one ounce; syrup of mulberries, six drachms: mix. This should be used twice or thrice a-day, with a soft linen rag, or the nurse's finger.

Coughing, crying, violent motion, and tight swathing, are apt to cause ruptures in the tender bodies of infants. While the rupture is fresh, it may be remedied by the constant wearing of a truss, made for that purpose. Astringent fomentations, made of pomegranate peels, balaustine, and red rose flowers, boiled in lime water, and mixed with red wine, may be used after the intestines are replaced, which should be immediately done. Small ruptures in the groin and privities, happening frequently in children, are usually cured with small difficulty, by only plaisters and bandages; but, when they continue obstinate, the child should be kept in the cradle, as quiet as possible.

When the *futures* or joining seams of the *head* continue to long open, it is thought a bad sign. In this case it is usual to rub the head often with a little warm rum or brandy, mixed with the white of an egg, and palm oil; a red cloth being constantly worn over the part. But, when this disorder proceeds from a collection of water in the head, it must be cured by issues in the neck, perpetual blisters, and purgatives. A purgative diet-drink may be made of rhubarb and sweet fennel seeds, to be drunk daily. When there is a disorder directly opposite to this, called *head-mould shot*, which signifies a too close locking of the futures, it is usually left to nature, as admitting of no help from medicine.

Breakings-out in children, when they are superficial, contain a thin yellow matter, and leave the skin beneath red when the scabs fall off, are rather salutary than hurtful. It is customary, however, to purge with a few grains of rhubarb, and anoint the pustules with cream, or oil of almonds, or extract of Saturn, commonly called Goulard. A little basilicon likewise, spread thin upon lint, has been found useful; and the body should be kept open. But, when these cases grow inveterate and stubborn, there can be no safer method than a course of Æthiop's mineral and rhubarb.

The *rickets* is a disorder of the bones of children, causing a bunching out or crookedness thereof. It may be occasioned by swathing a child too tight in some places, and too loose in others; by placing it in an inconvenient, or too often in the same, posture; suffering it to be long wet; not giving it proper motion, or using it to one arm only: It may also be owing to the parents, or some defect in the digestive faculty, or a visciduity of the blood. But the most evident cause of the rickets, is the violence done to the body by pressure or swathing, while the bones are but in a cartilaginous state. Add to this, external injury by falls, blows, dislocations, or fractures, which species sometimes brings on an asthma, consumption, or crookedness of the back. Upon the first appearance of this disease, which usually happens between the eighth month and the fifth year, the part it affects grows flaccid and weak; the child becomes pale, sickly, slothful, and loses the use of its feet, though it had it before; the head grows too large for the trunk, and cannot be managed by the muscles of the neck; knotty excrescences appear in the wrists, ancles, and tops of the ribs; the bones of the legs and thighs become crooked, which makes the motion disagreeable; and sometimes the arms also are distorted, and appear knotty. If these symptoms continue long, a difficulty of breathing, cough, and hysteric fever, come on; the belly swells, the pulse grows weak, and the child's life is in danger. The rickets is most commonly cured, when taken in time, and while the child is very young. But, if it continues long, the patient generally

rally becomes a dwarf, and is sickly or phthical during life, especially if the back be any way affected. A ricketty child should be used to motion, and kept as much as possible in a posture opposite to that which his bones are inclined to. It is also serviceable, before the distemper is confirmed, to plunge the child two or three times every morning in a tub of cold water, during the months of May and June especially. After being taken out the last time, it is to be well dried, and put immediately into a bed or cradle, there to sweat freely for an hour or more, as the strength will bear; and, when it grows cool again, it may be taken up and shifted. The back-bone also, and joints, may every night be anointed before the fire, with the white of an egg, beat into a water with a whisk or spoon; or with a liniment of rum and palm oil. It is usual likewise to apply a plaister of minium and oxycroceum along his back, and to rub him all over before the fire, but mostly the parts affected, with a dry linen cloth. But perhaps nothing can exceed the following liniment and plaister; the former for anointing the joints, and principal parts affected, with a warm hand, once or twice a-day; and the latter for applying to the back, or any particular part, being spread upon leather. Take nerve ointment, with oils of palm and bays, of each one ounce; balsam of Peru, and oil of nutmeg by expression, of each two drachms; oil of cloves and chemical oil of amber, of each ten drops; compound spirit of lavender, one ounce; spirit of sal ammoniac, two drachms: mix for a liniment. Take plaisters of cummin, brown minium, and herniam and oxycroceum, of each half an ounce; balsam of Peru, one drachm; powder of red rose flowers, and armenian bole, of each half an ounce; oils of amber and camphire, of each one drachm; oil of parsley, enough to make a consistence for a plaister. When the distemper seems fixed and obstinate, issues may be cut in the arms and neck, especially if the head be large, and the child of a gross habit.

OF BARRENNESS IN WOMEN, AND INSUFFICIENCY IN MEN.

BARRENNESS is such a state of a woman's body as indisposes it, upon the use of the natural means, to conceive and propagate her species. This distemper proceeds from many sources, which may be reduced to these two general heads: First,---An indisposition of the parts to receive the male semen in the act of copulation, or that vital effluvium streaming from it which alone can impregnate the ovaria. Secondly,---An inaptitude to retain and nourish the vital particle after it is injected, so as to make it grow and expand its parts, till it becomes a proper foetus. The reception of the seed is hindered by many causes; as, immature age, when by reason of the narrowness of the genital passages the woman cannot admit the virile member, or at least not without great pain, which makes her dislike copulation; and old age hath sometimes the same effect; for, in elderly virgins, the

parts are so straitened for want of use, that they cannot without difficulty contribute to the means of generation. Women who are lame also, or have their limbs distorted, or their hips depressed, cannot always lie in such a posture as is necessary for a fit reception of the semen. Too much fat likewise stops the passage, particularly, when the omentum presses upon the orifice of the womb, and renders the copulation incommodious. And, when a woman is troubled with a cold intemperament of the womb, she becomes dull and indifferent as to conjugal embraces, in which she hardly enjoys any pleasure, or is so slowly moved, that the inner orifice of the womb does not open seasonably to receive the man's seed. The passions of the mind are also a great hindrance to fertility, especially hatred between man and wife, whereby the woman, having an aversion to enjoyment, does not supply spirits sufficient to make the genital parts turgid at the time of coition: nor can the womb then kindly meet the effluvium, and draw it into its cavity in a due manner. Swellings, ulcers, callosities, obstructions, distortions of the genital or neighbouring parts, may be so many impediments to the proper reception of the male semen, or its retention and nutriment after reception. A stone in the bladder may have the same effect, as may a too great moistness and slipperiness of the womb or vagina, when they are filled with excrementitious humours, and rendered too lax. Conception is also hindered by a hectic, hydropic, or feverish sickly, habit; by a deficiency or obstruction of the monthly courses, when the natural briskness of the blood is wanting; by an immoderate flux of the courses, which impoverishes the fluids; by the whites, which, continuing too long, relax the glands of the womb, and drown, as it were, the prolific particles; and too often by *secret venery*, which utterly destroys the tone and vigour of the parts. This may particularly happen on the side of the man, since it induces a seminal weakness, and a want of a proper erection. A virulent gonorrhea or ill-cured venereal case, fast living, a worn-out constitution, and want of animal spirits, or sufficient seed, are so many obstacles to procreation. Sometimes, indeed, there may be no defect discoverable on either side, and yet the parties remain without issue, notwithstanding their most earnest endeavours to the contrary. When a swelling actually appears in the uterine vessels, when the menses are irregular, or the whites have continued long, if, by the use of proper means, the woman does not conceive under these circumstances, her own reason will dictate to her, that she must have immediate recourse to the remedies prescribed for those particular complaints. When she is very fat and bulky, and has room to think her conception is thereby hindered, her only way is to correct that vicious habit by a thin spare diet, and proper evacuations. If the lips of the privities, or the entrance of the vagina, are closed, it is manifest to the sight: but, when the orifice of the womb is shut up, it is difficult to be known, while the patient is very young, and till her courses

come

come down : but, when the patient is once certain that it happens by any of these causes, it may not be rash to say, that conception is impracticable till they are removed. When there is a total want of erection, or of feminal matter, on the side of the male, generation is not only impossible, but the cure very precarious and difficult. Preparatory to the cure of infertility in either sex, it is proper to use evacuations, unless any particular symptom shew them to be dangerous. Bleeding, lenient purgatives, such as the solutive electuary, and a gentle vomit of ipecacuanha, especially if the person be plethoric, or cacochymic, cannot but be of great service; because most of the medicines to be prescribed, in this case, being aromatic, or highly nourishing, may otherwise bring on inflammatory disorders, as the pleurisy, inflammation of the lungs, and the like. Due evacuations having been complied with, proceed with the following strengthening electuary: take roots of satyrion and eringo candied, of each one ounce; powders of cinnamon, sweet fennel seeds, and preserved ginger, of each half an ounce; mace, roots of contrayerva and Spanish angelica, of each one drachm; troches of vipers, one ounce; juice of kermes, six drachms; tincture of cantharides, half a drachm; syrup of cloves, a sufficient quantity to make an electuary. Let the quantity of a large nutmeg be taken every morning early, at about five o'clock every afternoon, and at night going to bed; and let this course be continued as long as the case requires. Three spoonfuls of the following wine should be drunk after each dose, to the efficacy of which it will make a considerable addition. Take canary wine, two quarts; cloves, nutmegs, long pepper, smaller cardamum seeds, Virginia snake-root, and cochineal, of each one drachm and a half; syrup of citron peels, four ounces: infuse the aromatics, and mix in the syrup. If these, upon trial, should not be found effectual; the following, which is more stimulating and powerful, should be taken, viz. take conserve of orange-peels, one ounce; Venice treacle, and confection of kermes, of each half an ounce; species of diambrae, winter's bark, powder of saffron, smaller cardamum seeds, carraways, powdered nutmegs, Virginian snake-root, and cloves, of each one drachm; viper's flesh, an ounce; balsamic syrup, enough to make an electuary. Let this be taken in the same quantities, and at the same intervals, as the other, drinking after it four spoonfuls of the following infusion: take cinnamon powdered, one ounce; sweet fennel seeds, bruised, and lavender flowers, of each half an ounce; Spanish angelica root, ginger, contrayerva, mace, and cochineal, of each one drachm and a half; canary wine, two quarts: infuse according to art for two or three days, and to the strained infusion, add syrups of saffron and cloves, of each two ounces. At twelve o'clock each day, take a table spoonful of the Solar Tincture in a wine-glass of cold spring water; this Tincture is a most excellent discovery for the purpose of curing sterility. It rectifies and warms the blood and juices, increases the spirits, invigorates and revives the whole human machine, and not only raises

raises the appetite to venereal embraces, but removes the usual obstructions of fertility; prepares the semen for performing its office, and the ova for impregnation. In old age it warms, comforts, and excites the generative parts to admiration, and seldom fails of performing a cure in forty or fifty days, if duly followed, and the barrenness or imbecility be not absolutely incurable by medicine; particularly if assisted with a nourishing diet, of which plenty of good potatoes and rich milk ought to make a considerable part. When there is a sufficient erection, and only the seed is wanting, all stimulating and aromatic medicines must be entirely omitted, and the cure attempted with the Tincture only, assisted with a nourishing diet; to which the use of external liniments must be added. Take nerve ointment, two ounces; oil of mace by expression, one drachm and a half; balsam of Peru, two drachms; chymical oils of lavender, cloves, and rhodium, of each four drops: mix. Anoint the parts between whites with this liniment; that is to say, the penis and scrotum if it be for a man, and the pudendum if for a woman, and it will not fail of administering comfort and strength. If any thing yet more stimulating be desired, a drachm and a half, or two drachms, of tincture of cantharides, may be added to either preparation. But I would not advise any debilitated person to be too busy with high provocatives, because they may incite to the use of venery before nature is prepared for it, and so exhaust the animal spirits more by one single act of coition than it would be by twenty in the common way. It is better, therefore, for most persons, to keep to the liniments and Tincture only, that their strength and ability may be always equal to their inclination. To recover the tone and vigour of the internal parts in women, use the following: take cloves, nutmegs, ginger, Spanish angelica, of each one drachm; aloes wood, mace, cardamum seeds, of each one scruple; mint-leaves, one handful; cantharides, two drachms; infuse them in a pint of white wine, and boil over a gentle fire till it is reduced to twelve ounces: then strain it, and inject two ounces warm into the uterus every night going to bed, taking at the same time forty drops of the Lunar Tincture in a wine-glass of cold water. When the parts abound with moisture, restraining or aromatic fumigations may be used to advantage, as in the case of the whites, and of the falling down of the womb and fundament. The ingredients proper in the present case, are storax, cloves, nutmegs, castor, ginger, Spanish angelica root, and galangals. Equal quantities of these may be taken powdered, and mixed together, and about an ounce of the mixture is sufficient to burn at a time, according to the directions in the place above referred to. Where other things have failed, the cold bath hath been of service to both sexes, especially in some phlegmatic constitutions; a journey to Bath also, or Tunbridge, and drinking the waters for some time, hath been attended with good success.

Having

Having before cautioned against the too frequent use of venery, especially for those who seem to be infertile through weakness, it will be proper just to hint the most auspicious seasons for performing the conjugal act to good purpose. It has been found, that, though a woman may conceive at any time during the three weeks that her courses are entirely off, yet she is more apt to do so immediately after their ceasing, than at any other time between the periods of their return. This hint may be made use of by weakly people, where the man and the woman are both equally prudent and temperate. When the lips of the privities grow together, they are cautiously to be separated by incision, and the sides kept asunder for some time by rags dipped in a proper ointment. And, if the mouth of the womb should happen to be closed, a proper pessary of cork, cased over with wax, may be introduced to keep it open. But, the assistance of a skilful surgeon being always necessary in these extraordinary cases, I choose not to insist on them any longer. I shall add only a few words, directed peculiarly to the men, who find themselves incapable to propagate their species, though they have not any natural defect in the instruments of generation: for, as to absolute impotency and incapacity of copulation, as it must be manifest to the sight, either from the want of erection, or due proportion of the penis, or a deficiency of the testicles, so it is what no man will pretend to cure; on which account our laws have given the wife a remedy, where there can be none for the husband, by allowing her to sue out a divorce, and marry another man. A simple gleet, brought on by self-pollution, is one of the greatest causes of insufficiency. It greatly debilitates the whole man, is attended with weakness, and oftentimes pain in the back, heaviness and pain in the testicles, and without help usually terminates in that kind of consumption which is called a *tabes dorsalis*, or consumption of the back. It is a constant oozing of a clear seminal matter, which distinguishes it from an impure venereal running. A man that is troubled with this shocking complaint, either from natural infirmity, or habitual vice, should never attempt to propagate his species, till such time as he is perfectly cured; for, besides that his endeavours would be ineffectual, they would infallibly heighten his infirmity. The best medicines in the whole body of physic for this dangerous distemper, are those just before mentioned; and the same directions should be exactly followed by those men whose seed is rendered too thin and watery, though without any such laxation of the seminal vessels as occasions a simple gleet; and also by those men, who through weakness of the parts, are apt to emit their seed as soon as they entertain any amorous thoughts, by which means they are not only hindered from copulation, but even from fruition itself. In both these cases, as well as in a simple gleet, abstinence from conjugal embraces, and persevering the use of the Solar Tincture, with invigorating

food, such as jellies, broths, oysters, and all agglutinating meats, are the most effectual means of obtaining a cure.

There is a certain occult and secret species of barrenness, that cannot be attributed to any of the causes before assigned, or indeed to any visible cause at all. This happens when no manner of defect is discoverable, on the side either of the male or female, and yet they shall, against their inclinations, remain without issue. Many odd conjectures have been started on this account, concerning the possible causes of sterility, when neither person appears to be in fault. Some superstitious people have imputed it to sorcery, and recourse has been had to incantations, amulets, charms, and magic rites, in order to the cure. But people of understanding give no heed to such fables, being satisfied, that when both parties are of suitable years, brisk, and not labouring under any apparent weakness or indisposition, if fertility do not follow their nuptial intercourse, there must be some real and mechanical reason for it, though not apparent to the senses. When there appears no deficiency or defect in either the man or woman, and none of the before-mentioned causes of barrenness exist, we must then recur to the real physical cause, which is considered and understood by very few. It is what is called the *temperament, constitution, or complexion*; if the man be of a hot temperament, the woman should be of a cold one; if he be of the dry temperament, she should be of the moist: but, if both be of a dry or both of a moist constitution, they cannot propagate, though neither may be barren, singly considered, and, if joined with an apt constitution, might both become fruitful. It must fall under every one's observation, that both women and men, who marry more than once, will have children by one marriage, and not by another; which will certainly confirm what is above asserted. And again, there are other causes in nature, much more abstruse and occult than the foregoing, whereby men and women prove barren, though, to all external appearances, their conformation is every way congenial to procreation. This cause, fostered in the mother's womb, and having its root in the construction of the zodiacal signs and planetary influence under which the embryo is conceived and nourished, is totally incurable. So likewise the variety of parts, both male and female, have their cause in the construction of the heavenly bodies, which predominate and govern their conception and birth; for it is certainly found, that, if the Sun be configured with the Moon, in the degrees of Mercury, and Mars and Venus irradiate the same, in masculine signs, the man born under such an influence will exceed in that which is natural, having those parts in excess which are proper to men; but the women so born will have a conformation of parts preternatural and mixed; but, if Mars and Venus be constituted after a masculine manner in feminine signs, the men will be subject to a mixture of sex, and the women to excess of parts and violent lust. All these speculations,

tions, wonderful as they are, and a thousand others, whose effects, though unseen, are most sensibly felt, are fully explained in my Illustration and Display of the Occult Sciences; where it is plainly shewn, that, the more we enquire into the pathless ways of nature, the more readily we deduce a radical cause for all her operations.

OF SYMPATHY AND ANTIPATHY.

TO understand the properties of sympathy and antipathy, is, in fact, to take into our comprehension the universal system of nature, with her obvious and occult properties, and the gradations and consent of parts of all its atoms. This study becomes all men; but more especially those who practise physic, since their effects not unfrequently preserve life, or destroy it; and, in the beginning, middle, and end, of diseases, the result may be always known. Sympathy and antipathy are found in all things; and, if traced, account for those wonderful occurrences in nature, which otherwise appear altogether inexplicable. All vegetable and mineral productions have not only a wonderful sympathetic power with their own species, but so likewise has all animated nature; and more particularly man. It is certainly true that this celestial invisible principle is born with us, and emanates from the centre of the intellectual soul, combined with the terrestrial body; and, passing through its nerves, forms an atmosphere around us, whereby the sensations of sympathy and antipathy, of love and hatred, of joy and grief, and all the propensities of human nature, are by a collision of rays, which reciprocally cohere or repel whatever comes in contact with them, that the effect is made manifest to our senses. Hence it is, that savoury high-seasoned meats, seen or smelt, excite the appetite and affect the glands and parts of the mouth; that an impudent or shameful thing, seen or heard, affects the cheeks with blushes; and so, on the contrary, if a thing please, it affects the præcordia, and excites the muscles of the face and mouth to laughter; if it grieve, it affects the glands of the eyes, so as to occasion tears, and irritates the muscles of the face into an aspect of crying; so kissing, though the delirium or pleasure is excited by the lips, yet the most sensible irritation falls upon the genital parts, which are rendered turgid, stiff, and apt for procreation, as the sum and centre, or full end and completion, of all sublunary enjoyments. And hence the cause of those indescribable passions, love, lust, inclination, sympathetic affection, &c. for if we see a limb amputated, or a violent blow struck, we cannot help feeling a sympathetic pain in the self-same member of our own bodies; which is the reason why those persons can never make good surgeons, whose conception and birth were irradiated by the strong sympathetic rays of benefic stars; or, as it is commonly termed, inherit strong sympathizing passions. So again, if either man or woman

look upon brutes in the act of copulation, it sympathetically affects the same organs in themselves, and excites to lasciviousness and lust.

Some persons, we find, are so delicately organized, as to become violently enamoured with an object at first sight, without ever having exchanged a single word; and it often happens that there is no alternative but death or the immediate enjoyment of the beloved person! This is produced by a sympathy of souls, united by a combination of self-reflected rays, which reciprocally cohere from the male to the female, and from the female to the male, by the action of the intellectual soul on the solids and fluids of the body; and, as this combination or collision of rays is formed according to the different principles from whence it acts, and the organs of sense on which it strikes, so it excites a sweet vibratory delirium in the brain, which constitutes that ardent affection and longing desire for the person, whose genial effluvia had thus drawn forth or excited the passion of love. And, it is by this alone, we can account for those perfections of beauty and merit discoverable by one man's senses, to which another will continue for ever insensible and blind.

It is from a similar cause that we define the longing of a pregnant woman, and its effect upon the foetus; for, as like produces its like, and the child takes its frame from the external members of its parents in the act of coition, so there is a sympathy and concordancy betwixt the child's members and those of its mother; therefore, whatever member the mother touches at the time her soul is drawn forth in longing after some elementary substance, the same member of the child receives the impression, and an external mark is produced, according to the nature and quality of the thing longed for. But, this impression can only take place before the embryo has quickened; for, till then, the child is passive, and the generative essence of the mother active, whence follows a consent of parts; but, when the light of life is kindled in the foetus, it lives in its own spirit, and is no longer subject to this affection, nor so liable to abortion.

We might here adduce ten thousand curious instances of the effects of sympathy and antipathy, as well from natural history as from the Occult Sciences; but, as this would be foreign to my purpose, and too much enlarge the present publication, I shall reserve a very full discussion of this subject for a work I shortly intend to publish, intitled, "A Key to Physic and the Occult Sciences;" in which I shall lay down such rules as to prevent a possibility of mistaking the patient's case, or of failing of a cure, if the lamp of life be not too far exhausted; and shall also more particularly elucidate the astrologic science, in order to throw new lights on some interesting parts of my former publications; and also to illustrate the science of Animal Magnetism, which is wholly founded on the principles of sympathy and antipathy.

CULPEPER'S DISPENSATORY, FOR FAMILY USE;

CONTAINING

A choice SELECTION of invaluable PRESCRIPTIONS for almost all DISEASES incident to the HUMAN BODY.

AROMATIC OR SPICE WATER.

TAKE of white canella, half a pound; fresh outward peel of lemons, four ounces; lesser cardamum seeds, two ounces; French brandy, two gallons. Let them steep together for four days; and then distil off two gallons.

This is a warm serviceable cordial; for, it gratefully invigorates the animal spirits, stimulates the nerves, and thus dissolves cold viscid humours, and expels flatulencies. It is an excellent stomachic, helps digestion, and stops vomiting; and as a carminative is used in the rougher cathartics. Half a wine-glass of it is a dose in windy and painful complaints of the stomach and bowels, and to be repeated occasionally.

PLAGUE AND FEVER WATER.

Take roots of master-wort, a pound and a half; angelica seeds, half a pound; elder-flowers, leaves of scordium, of each four ounces; French brandy, three gallons. Steep them together for the space of four days; and then draw off, by distillation, two gallons and a half.

The ingredients are well chosen for the purposes intended; it being designed as a high cordial in very low and languid cases, and to raise the spirits in the plague and malignant fevers with depressions. If a fifth part of distilled vinegar be added, it is then termed *aqua epidemiae acida*, which is a very powerful sudorific, and resister of putrefaction in all pestilential and other putrid fevers.

EYE-WATER.

Take white vitriol, half a pound; water, four pints. Boil them until the vitriol is dissolved; and then filter the liquor for use.

This is calculated to cool and repel those sharp rheums and inflammations which sometimes fall upon the eyes, where the vessels, being weak and thin, are often unable to resist duly the impulse of the blood, unless they are constringed and strengthened by some such collyrium. It is likewise good to clear them of beginning films and specks. If it should prove too sharp for tender eyes, it may be diluted with a little spring or rose-water.

ANODYNE BALSAM.

Take of saponaceous balsam, or opodeldoc, a pound and a half; of liquid laudanum, half a pound. Mix them for use.

This is certainly an extremely penetrating and resolute anodyne, both for internal and external use; being a most excellent medicine for procuring ease in the extremities of pain, and in nervous and nephritic colics. It cleanses all the viscera and glandular parts; therefore good in the jaundice and such distempers of the urinary passages as proceed from the obstruction of gravel or slimy humours. Inwardly it may be given from 20 to 40 drops. And outwardly, applied to the pained part, it does mighty service, a rag being dipped in it, and retained thereon.

ALEXETERIAL BOLUS.

Take of Virginian snake-root, fifteen grains; of castor, ten grains; of camphor, three grains; syrup of sugar, enough to mix and make them into a bolus.

This is a powerful alexipharmic, and is given in most kinds of fevers, especially the worst and more malignant sort, attended with convulsions and deliria. It is hardly ever omitted, when the pulse and spirits begin to flag in the progress of a putrid fever, small-pox, measles, miliary fever, &c. It is good in nervous and paralytic cases, which proceed from too much humidity; as also in the febricula, whether hysterical or hypochondriacal. If plentifully prescribed, it requires to be well diluted with small liquors; and thus managed, it seldom fails of raising a diaphoresis, and bringing the distemper to a crisis.

DIAPHORETIC BOLUS.

Take of compound powder of contrayerva, and of crude salt of ammoniac, each one scruple; syrup of sugar as much as is sufficient to make a bolus.

This penetrates into the most intimate parts, and is a noble aperient, sudorific, antiseptic, and diuretic. Hence it becomes proper, in cases where perspiration is to be augmented; and in fevers, in which the disorder is to be eliminated by the cuticular discharges. It is prescribed with a draught of the plague-water, to remove cachectic and anasarctous swellings.

BOLUS OF JALAP WITH MERCURY.

Take of choice jalap, one scruple; colomet, from five to ten grains; syrup of sugar, a sufficient quantity. Mix them together into a bolus.

This

This is a proper bolus in most cases where a brisk purgative, preceded by a clyster, is necessary, either to make a revulsion after bleeding in inflammatory swellings and obstructions of the parts contained in the head, neck, or thorax; or to make an evacuation of the intestines and adjacent viscera of the abdomen. Thus may a bilious fever be carried off, when it has lingered, and there is little probability of its ending critically by any other way: as a diaphoretic and hydrogogue, it is of use in dropsies, defluxions of the head, eyes, and ears; as also in humoral coughs, and many obstinate chronic distempers. It destroys worms, cures a virulent gonorrhoea and fluor albus. It is also good to cleanse the bowels from their redundant viscid mucus, that often clogs or shuts up the chylopoietic system, so as to hinder the entrance and proper effects of other medicines. In intermitting fevers it is a specific.

A PECTORAL BOLUS.

Take of spermaceti, fifteen grains; of gum ammoniacum, ten grains; of the volatile salt of hartshorn, seven grains. Mix, and make them into a bolus.

This is an excellent balsamic in many distempers of the breast; and gently deterges and heals. In coughs, pleuritis, and inward imposthumations, where the mucus of the bowels has been abraded by acrimony and choler; as also in diarrhoeas and dysenteries; this is a very good healer. In ulcerations of the kidneys and bloody urine, it is likewise a very suitable medicine; and, by softening and relaxing the fibres, it contributes frequently to the expulsion of gravel. It may be taken once or twice a-day with some proper emulsion, draught, or julep, according to the indications.

THE RHUBARB BOLUS WITH CALOMEL.

Take of the best purgative rhubarb, twenty-five grains; of calomel, five grains. Mix, and make them into a bolus, with as much syrup of sugar as will suffice.

This is an admirable medicine in most cases where purging is necessary, to cleanse the first passages of any thing that hinders the successful operation of other alterative medicines. See the virtues of the jalap bolus, which this nearly answers, but is more astringent, hepatic, stomachic, and a purger of the urine and fabulous concretions.

EMOLLIENT CATAPLASM.

Take of the crumb of bread, eight ounces; white soap, one ounce; fresh cow's milk, a sufficient quantity. Boil them a little, and spread for use.

This is anodyne, penetrating, and resolvent, therefore applied to the soles of the feet in fevers, to the joints when affected with the gout, and causes sometimes the exudation of a great quantity of serous matter; and so white swellings.

SUPPURATING CATAPLASM.

This is made by adding to the foregoing Cataplasm, of raw onions bruised, one ounce and a half; basilicon ointment, one ounce.

This is good to draw and suppurate all kinds of tumours; and to ripen, break, and cleanse, imposthumations.

APERIENT ALE.

Take of old mustard-seed, ten ounces; long birthwort-roots, six ounces; tops of lesser centaury, two ounces; fennel, one ounce; new small ale, ten gallons.

This cleanses the womb, excites the menstrual discharges, and forwards delivery. It is serviceable in hysterical disorders, and good to loosen and discuss viscidities; and therefore excellent in all paralytic cases, and the decays and defluxions attending old age.

CEPHALIC ALE.

Take of wild valerian-root, ten ounces; whole mustard-seed, six ounces; Virginian snake-root, two ounces; rosemary, or sage, three ounces; new small ale, ten gallons.

This is good against epilepsies, apoplexies, palsies, and all diseases of that kind, and vertiges from uterine obstructions; it is also of use in almost all nervous complaints; especially such as arise from too great moisture and cold.

STRENGTHENING CONFECTION.

Take of bole ammoniac prepared, three ounces; tormentil roots, nutmegs, olibanum, of each two ounces; opium, one drachm and a half; syrup of dry roses, thrice the weight of the powders. Mix them according to art.

This alexipharmic, anodyne, and astringent vulnerary, is recommended in immoderate evacuations of the abdomen. A drachm or two of it, at a dose, along with the chalk julep, will give an effectual check to the disorder. It is successfully prescribed for diarrhoeas in the measles, small-pox, or fevers; as also for relaxations, hæmorrhages, and hurts in the time of pregnancy; and likewise for the fluor albus, and feminal weakness.

ANTIHECTIC DECOCTION.

Take of the roots of comfrey, eryngo, each half an ounce; conserve of roses, two ounces; water, three pints. Boil these ingredients together, till there remains a quart of liquor after straining; to which add of sweet spirit of vitriol, forty drops.

This is grateful and strengthening; it restrains the saline particles of the blood, and hinders it from rushing too impetuously through the lungs; therefore it takes place in newly begun consumptions, hectic fevers, night sweats, &c. where the coagulation of the humours causes a wasting of the muscular parts.

COMMON DECOCTION.

Take of mallow leaves, comomile flowers, each one ounce; water, two quarts. Boil till one quart of the liquor is wasted: then strain out the remaining decoction for use.

This is emollient and carminative, therefore accounted a good anodyne, and excellent against gripes, nephritic pains, stranguries, and heat of urine; as also for cramps, and such-like spasms. It is likewise used for lotions and clysters.

THE DIURETIC DECOCTION.

Take of the roots of parsley, or those of fennel, one ounce; seeds of wild carrot, three drachms; peltitory of the wall, half an ounce; raisins of the sun, two ounces; water, three pints. Boil them together, till there remains a quart of liquor after straining; to which add of nitre, one drachm.

This absterges much slime and viscid adhesions from the stomach and bowels; cleanses the viscera, particularly the kidneys; keeps the juices cool and fluid; and greatly assists their discharge by urine, especially in uterine and hysterical cases.

VULNERARY DECOCTION.

Take of the herb ground-ivy, leaves of plantain, each half an ounce; water, three pints. Boil them till there remains a quart of liquor after straining; to which add, of white sugar, half an ounce.

This is cooling, absterfivè, and vulnerary; and prescribed as an astringent in distempers of the lungs, chiefly for such consumptions as proceed from sharp thin humours, weaknesses, and spitting of blood.

ANTIDYSENTERIC ELECTUARY.

Take of the strengthening confection, one ounce; balsam of Lucatellus, (dissolved in the yolk of an egg,) half an ounce. Mix them together.

This is an excellent internal vulnerary in an obstinate bloody-flux, to prevent abortion, &c. and very aptly formed for corresponding with such purposes. The confection has its share in accomplishing a cure, partly from its astringency, partly from its opiate quality, by rendering the vessels insensible of the pungency of the morbid particles; while the virtues of the balsam agglutinate, heal; and stop up the mouths of the vessels, and sheath the acrimonious humours which abrade the parts.

BALSAMIC ELECTUARY.

Take of conserve of roses, two ounces; balsam of Lucatellus, (dissolved in the yolk of an egg,) one ounce. Mix, and make them into an electuary.

This is a noble medicine, easy to take, and ought to be repeated on the urgency of such coughs as give suspicion of tubercles, ulcerations, and decays of the lungs. It dissolves tough phlegm in the bronchia, cures catarrhs

and coughs from tickling defluxions; it repairs and heals inward excoriation and bloody discharges, especially of the kidneys, bladder, and uterus. In feminal weaknesses, old gleets in both sexes, there can be nothing better contrived. The quantity of a nutmeg may be taken two or three times in a day, with a draught of the antihæctic decoction.

CEPHALIC ELECTUARY.

Take of wild valerian-root, mistleoe of the oak, each one ounce; syrup of sugar, a sufficient quantity. Mix them into an electuary.

This is calculated for disorders of the head, and is in great esteem for epilepsies and inveterate head-achs. It is frequently prescribed in apoplexies, vertigoes, and convulsions from uterine obstructions.

ELECTUARY AGAINST THE PILES.

Take of lenitive electuary, two ounces; sulphur vivum, half an ounce. Make thereof an electuary.

The quantity of a nutmeg is to be taken of this every morning and night; it will keep the belly moderately lax, and greatly ease the piles.

LENITIVE ELECTUARY.

Take three ounces of polypody-roots, and three quarts of water. Boil till two quarts are wasted; adding, towards the end of the coction, two ounces of fena, and half an ounce of coriander seeds. Strain out the liquor, add to it four pounds of white sugar, and boil to the consistence of a thick syrup; with which mix a pound of the pulp of French prunes; half a pound of the pulp of Cassia, and the same quantity of tamarinds. Make the whole into an electuary.

This cools and purges very gently, and is convenient enough to add in clysters. Internally it is more proper to prevent costiveness, than to be exhibited as a regular cathartic. It is also intended to cleanse the liver and other viscera.

STRENGTHENING ELECTUARY OF BARK.

Take of Peruvian bark, one ounce and a half; colcothar of vitriol, three drachms; syrup of sugar, a sufficient quantity. Make them into an electuary.

In robust constitutions this is prescribed for stubborn agues; and also for fluxes and hemorrhages. It promotes discharges by urine, destroys worms, brings them away, and strengthens the fibres; but in thin hectic habits it is not so proper. The colcothar here prevents the bark from going off by stool, which it is sometimes apt to do; and opium likewise will have the same effect.

ELECTUARY AGAINST FLUXES.

Take of the strengthening confection, two ounces; extract of logwood, one ounce; syrup of dry roses, a sufficient quantity. Make them into an electuary.

This

This is an astringent, and good to fortify the stomach and bowels when weakened by a diarrhoea; and is much esteemed of late for its virtues in curing a dysentery.

WARM PLAISTER.

Take of gum-plaister, one ounce; blistering-plaister, two drams. Melt them together over a gentle fire.

The chief intention of this is to raise blisters, and to create a stimulus in a languor or stupor of the nervous system; to dissolve a viscosity or siziness of the juices, and hinder their tendency to a coagulation; or to cause a derivation and discharge of some morbidic humour, and prevent its returning into the blood; therefore it is esteemed useful in some inflammatory fevers, dropies, and certain stages of the chrysielline or watery small-pox; especially if the pustules subside, and the extremely viscid matter of the disease can neither be brought to suppurate, nor be carried off by diuretics. It remarkably affects the kidneys and bladder, and provokes urine, not by an easy natural ejection, but rather by an erythismus from its acrid salts that cause a strangury, which should be guarded against by broths and emulsions. It is good against a mortification, and reckoned an efficacious cleanser and scourer of the urinary passages and uterus, when obstructed with slough and viscidities. But its use requires the highest caution and prudence; hence it is not every one who must think himself qualified to meddle, without distinction, with remedies, which are sure to do good or hurt, according as they are administered.

COMMON PLAISTER.

Take of litharge prepared, three pounds; oil of olives, six pounds. Boil them up to a due consistence.

This is to supply the place of the diachylon plaister of former dispensatories; and is esteemed more emollient, muturant, and resolvent. It will also incarnate and cicatrize.

DEFENSIVE PLAISTER.

Take of litharge prepared, two pounds; oil of olives, four pounds. Boil them almost to the consistence of a plaister, in which qualify six ounces of yellow wax, and four ounces of clobanum. Then add six ounces of bole ammoniac prepared, two ounces of dragon's blood in powder, and four ounces of Venice turpentine.

This is employed to consolidate fractures, to strengthen luxations and weaknesses of the loins and joints; and is also serviceable for ruptures and chilblains.

BLISTERING PLAISTER.

Take of Burgundy pitch, twenty ounces; Venice turpentine, cantharides in powder, each six ounces.

This is a powerful epispastic, and is applied either to the head, between the shoulders, or to the soles of the feet. See its use in the warm plaister. But when applications are made to the feet, with an intent to stimulate

strongly, excite pain therein, and relieve the head, cataplasms composed of equal parts of scraped horse-radish, and powdered mustard-seed, moistened with old yeast, will answer the design expeditiously, strongly, and effectually.

MERCURIAL PLAISTER.

Gum plaister is substituted here for diachylon.

This admirably warms, softens, and dissolves all indurations and hardened tumours, be they chalky, scrophulous, or venereal.

STOMACH PLAISTER.

Take of yellow wax, eight ounces; tacamahaca in powder, palm-oil, each four ounces. Melt them together, and add of cloves in powder, two ounces; expressed oil of mace, one ounce and a half. Mix, and make them into a plaister, which is to be moistened, when fresh spread, with some drops of distilled oil of mint.

This is intended as a warm, carminative, and cordial, application to the stomach, and exerts very considerable effects when such things are wanted; therefore it is useful in flatulencies, gripes, and all complaints arising from indigestions; and a cold weak stomach cannot well fail finding relief from its use.

COMMON EMULSION.

Take of sweet almonds, one ounce; water, one quart. Make them into an emulsion; to which add of white sugar, two drachms. If three drachms of gum arabic be previously boiled in the water, the preparation is called

ARABIC EMULSION.

Either of these are singularly useful in many emergencies, particularly in acute distempers, and the gravel. In heat of urine and stranguries, either from acrimonious humours, or the salts of epispastics, they give immediate ease; and ought to be drunk while fresh, half a pint at a time, and pretty often. There are other sorts of emulsions, which are calculated for diuretics, coolers, and pectorals.

ANODYNE CLYSTER.

Take of the infusion of linseed, six ounces; liquid laudanum, forty drops. Mix them together.

This is excellent to assuage pains in dysenteries, and inflammations of the uterus and bladder, by reason of a proximity and consent of parts.

ANTICHOLOIC CLYSTER.

Take of the common decoction, half a pint; tinctura sacra, one ounce; common salt, one drachm; linseed oil, two ounces. Mix the whole together.

This falls in with the view of unloading the bowels of their costive contents, and consequently procures an immediate relief on many occasions, chiefly in flatulencies, gripes,

gripes, and bilious cholics. The addition of the salt, by a mild gentle stimulus, insures its effects. It likewise destroys worms, particularly the ascarides, if assisted with a few grains of calomel by the mouth.

THE PURGING CLYSTER.

Take of the common decoction, half a pint; white soap, one ounce; syrup of buckthorn, an ounce and a half. Mix them according to art.

This is penetrating, detergent, and capable of dissolving indurations and grumous viscidities of the intestinal tube, especially in the jaundice, and by ridding the bowels of their concreted contents may prevent an inflammation. It is useful in disorders of the head, and may cause a revulsion in the feculent vomitings.

EXPRESSION OF MILLEPEDES.

Take of live millepedes, (commonly called wood-lice,) three ounces; simple fennel-water, one pint; compound horse-radish water, half a pint. Bruise the millepedes, gradually adding to them the distilled waters; and afterwards press out the liquor.

This is an excellent diuretic, sweetener and cleanser of the blood, and a most efficacious medicine in all chronic cases, that are to be relieved by promoting the urinary discharges, as are many inveterate ulcers, strumas, and scrophulous disorders, and such as frequently are the fore-runners of scorbutic dropsies, from a retention of such humours as obstruct the viscera, and fill the whole habit with water and viscidities. Hence it is of singular efficacy in the stone, jaundice, nephritic pains, dysury, cholica, and asthma.

AROMATIC FOMENTATION.

Take of cloves, mace, each one drachm; red wine, one pint. Boil them a little, and then strain out the liquor.

This, applied warm to the abdomen, will be found of admirable service in cholics, and for relaxed weak stomachs that are subject to distension from flatulency. It may be used to the head with success in any disorders from too much moisture and pituitous defluxions.

STRENGTHENING FOMENTATION.

Take of oak-bark, one ounce; pomegranate peel, half an ounce; forge water, three pints. Boil them till there remains a quart of the strained liquor; to which add of rock allum, two drachms.

This is proper for hæmorrhages, whether uterine, hæmorrhoidal, or from any other part. It is also good to foment sprains, fractures, or paralytic limbs; and will help to check immoderate vomitings.

THE COMMON GARGLE.

Take of water, six ounces; nitre, one drachm; honey of roses, one ounce. Mix them together. To this gargarism are sometimes added, of sweet spirit of vitriol, fifteen drops.

This is proper to cleanse and scour the mouth and throat from slough, and the phlegmatic matter which stuffs and tumifies the glands. It is also good to cool and deterge the mouth when sore, parched, and dry with a fever.

EMOLLIENT GARGLE.

Take of marsh-mallow roots, two ounces; figs, in number four; water, three pints. Boil till there remains one quart of liquor, which strain out for use.

This is excellent to assuage pain and inflammation in the throat or mouth, to mature any ulcer therein, and to mollify the blistered tongue and fauces in a salivation. The learned and accurate Sir John Pringle observes, that in the inflammatory quinsy, or strangulation of the fauces, little benefit arises from the common gargles; that such as are of an acid nature do more harm than good, by contracting the emunctories of the saliva and mucus, and thickening those humours; that a decoction of figs in milk and water has a contrary effect, especially if some sal-ammoniac be added; by which the saliva is made thinner, and the glands brought to secrete more freely; a circumstance always conducive to the cure.

SALINE DRAUGHT.

Take salt of wormwood, one scruple; lemon juice, half an ounce; white sugar, one drachm. Mix them together.

This is an effectual remedy to stop vomitings, and is of singular use in fevers, especially those of the intermittent kind, when the bark often fails. It causes gentle breathing sweats, and may be repeated every five or six hours occasionally.

ANTISCORBUTIC INFUSION.

Take of water-trefoil, two ounces; oranges, half an ounce; boiling water, two quarts. Let them stand in infusion for a night in a close vessel; afterwards strain the liquor, and then add to it of compound horse-radish water, half a pint.

This is effectual against scrophulas, the king's-evil, and all obstinate scorbutic diseases. In the rheumatic, dropical, and cachectic habits, it will be of good service. It likewise gives due warmth to the nerves, which in paralytic cases they are destitute of. It may be drunk at discretion, and the use of it continued according to the exigency of the disorder.

INFUSION OF LINSEED.

Take of linseed, two spoonfuls; liquorice root, sliced, half an ounce; boiling water, three pints. Let them stand to infuse by the fire for some hours, and then strain off the liquor.

If an ounce of the leaves of colt's-foot be added to these ingredients, it will then be the pectoral infusion. Both these are emollient mucilaginous liquors, and may

be taken with advantage as ordinary drink in difficulty of making water; and in coughs and other complaints of the breast.

BALSAMIC INJECTION.

Take of balsam copaiba, half an ounce, the yolk of one egg. Work them well together, and gradually add of lime-water, six ounces; honey of roses, two ounces. Mix the whole well together.

This is excellent for the consolidation of wounds, and to cleanse and heal ulcerations, gleet, and seminal weaknesses, if used two or three times a-day; and for corroborating the nervous parts, which have been relaxed by the disease.

THE MERCURIAL INJECTION.

Take of quick-silver, balsam copaiba, each half an ounce. Beat and work them together, till the quick-silver is extinguished; then put to the mass the yolk of one egg. Mix the whole very well together, gradually adding of rose-water, half a pint.

This is calculated for gonorrhœas, and venereal ulcers in the urethra, vagina, and uterus; the quicksilver destroys the virulency, while the balsam heals and sheaths the excoriated parts from the acrimony of the urine.

THE CORDIAL JULEP.

Take of alexeterial water, four ounces; aromatic water, two ounces; saline aromatic spirit, tincture of saffron, each two drachms; white sugar, half an ounce. Mix, and make them into a julep.

This is a high cordial, and will bring on an effectual moisture; consequently remove all weariness, heat, and tension of the parts; therefore it is of great service in the depressed state of fevers, fatigue from excesses, and lowness of spirits. A few spoonfuls, drunk every three or four hours, will, by its enlivening quality, communicate an agreeable sensation. It is likewise very aptly prescribed with powders and boluses.

DIAPHORETIC JULEP.

Take of alexeterial water, four ounces; spirit of mindereus, two ounces; volatile salt of hartshorn, ten grains; syrup of meconium, one ounce. Mix them together.

In slow malignant fevers, with cold clammy sweats, pale visage, a low intermitting pulse, and where great restlessness prevails, this julep will be singularly beneficial. A tea-cupful may be given and repeated every four or five hours, till some crisis appears, and the distemper abates.

DIURETIC JULEP.

Take of spirit of mindereus, four ounces; compound horse-radish water, two ounces; syrup of marsh-mallows, three

ounces. Mix, and make a julep; to which may be added occasionally, of spirit of amber, one drachm.

This is strongly diuretic; hence a good remedy against a suppression of urine from any cause, the gravel and nephritic pains. It will also promote and assist an urinary crisis; and may be repeated as the urgency of the symptoms indicates.

THE FETID JULEP.

Take of rue water, six ounces; assa-fatida, one drachm and an half. Dissolve the assa-fatida in the water, and add to the solution, of antihysteric water, two ounces; distilled oil of hartshorn, twenty drops, received upon ten drachms of white sugar. Mix the whole well together.

This is ordered in hysterical affections, and a defective state of the menses, and sometimes in hypochondriacal cases. A tea-cupful may be taken three or four times a-day.

THE SALINE JULEP.

Take of mint water, syrup of lemons, each two ounces; salt of wormwood, one drachm. Make them into a julep.

This is an admirable remedy in vomitings and hiccups. It has a mild and innocent virtue, though powerfully attenuating and resolving, diuretic and sudorific: hence it is excellent in rheumatisms, fevers, and all disorders from a stiness of the blood. Two or three spoonfuls are given every five or six hours.

THE ANODYNE LINIMENT.

Take of nerve ointment, three ounces; balsam of turpentine, one ounce. Mix them together.

This is a warm invigorating topic, and may be used with good effect, to excite the nerves to action when too languid. It is applied to paralytic and numbed limbs, to restore a due sense and feeling; and, by its penetrating quality it is of good use in a sciatica and the gout.

PECTORAL LOHOCH.

Take of sperma-ceti, white soap, each two drachms; whites of eggs, a sufficient quantity. Mix them thoroughly together, and then add, of fresh-drawn linseed oil, one ounce and an half; syrup of marsh-mallows, three ounces. Mix the whole well together.

This contains very great emollient and balsamic virtues; and, by the inciting and detergent property of the soap, becomes a powerful deobstruent in infarctions of the breast; hence it is recommended in a difficulty of respiration, either from a dry husky cough, or a tough thick phlegm; and likewise in imposthumations and tubercles of the lungs.

ALOETIC PILLS.

Take succrine aloes, white soap, of each equal parts; this honey, as much as is sufficient. Make them into a mass.

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The soap here is added purely to promote the dissolution of the aloe in the stomach; for, pills made up of raisins, and substances not easily dissoluble, frequently pass through the body entire: hence, by the purgative quality of the aloe, and detergent property of the soap, the glaires and viscidities of the intestines are dissolved and carried off; therefore the pills are stomachic, antifebrile, and excellent in nephritic and choleric pains.—Moreover, the aloe, being hepatic, forward the discharge of the bile, whilst, by the concomitancy of the soap, it breaks the obstructions of the liver, blends and assimilates the humours. Hence it appears how advantageous and essential it is to adapt and combine medicines judiciously.

PURGING ECPHRATIC PILLS.

Take succotrine aloe, extract of black hellebore, scammony, of each two ounces; vitriolated tartar, three drachms; distilled oil of juniper, a drachm and an half; syrup of buckthorn, as much as is sufficient to make the whole into a mass.

These are an excellent hydragogue, particularly in cachectic and scorbutic habits abounding with dropical humours. Three or four of these may be taken once a-day, or every other day, and continued according to the exigency of the complaint.

MERCURIAL PILL.

Take of purified quicksilver and honey, each half an ounce. Rub them together in a mortar, till the globules of mercury are perfectly extinguished; then add, of Castile soap, two drachms, powdered liquorice, or crumb of bread, a sufficient quantity to give the mass a proper consistence for pills.

When stronger mercurial pills are wanted, the quantity of quicksilver may be doubled. The dose of these pills is different, according to the intention with which they are given. As an alterant, two or three may be taken daily. To raise a salivation, four or five will be necessary. Equal parts of the above pill and powdered rhubarb made into a mass, with a sufficient quantity of simple syrup, will make a mercurial purging pill.

MERCURIAL SUBLIMATE PILL.

Dissolve fifteen grains of the corrosive sublimate of mercury in two drachms of the saturated solution of crude sal ammoniac, and make it into a paste, in a glass mortar, with a sufficient quantity of the crumb of bread. This mass must be formed into one hundred and twenty pills.

This pill, which is the most agreeable form of exhibiting the sublimate, has been found efficacious, not only in curing the venereal disease, but also in killing and expelling worms, after other powerful medicines had failed. For the venereal disease, four of these pills may be taken twice a-day, as an alterant three, and for worms two.

PACIFIC PILLS.

Take of galbanum, myrrh, white soap, of each two ounces; opium, one ounce; syrup of sugar, as much as is sufficient to make the whole into a mass fit for pills.

These are admirable in assuaging hypochondriacal and hysterical complaints, nephritic and uterine pains, caused either from obstructions, or ulcers in the kidneys or uterus.

THE PECTORAL PILLS.

Take of gum ammoniacum, an ounce and an half; myrrh, one ounce; balsam of sulphur terebinthinated, one drachm; syrup of marsh-mallows, as much as will make the whole into a mass.

These are healing and balsamic in a hæmorrhisis, infarctions, and ulcers of the lungs.

STOMACHIC PILLS.

Take of succotrine aloe, an ounce and a half; gum ammoniac, myrrh, each half an ounce; vitriolated tartar, two drachms; distilled oil of mint, half a drachm; syrup of sugar, a sufficient quantity. Mix according to art.

These, by their cathartic, bitter, attenuating, and aromatic qualities, incise and purge away sloughy humours, which foul the coats of the stomach; also warm and fortify the fibres, whereby the gastric juice and digestion are promoted. They are most convenient in an advanced age, and full cachectic habits, which abound with cold viscid humours. They may be taken five or six at a dose.

THE BALSAMIC POTION.

Take of balsam copaiba, three drachms; distilled oil of juniper, thirty drops; the white of an egg. Work them well together, and mix in, of fennel water, compound horseradish water, each three ounces; syrup of marsh-mallows, two ounces.

This is vulnerary and diuretic; hence chiefly of use in wounds, ulcers, and weakness of the kidneys and uterus.

LITHONTRIPTIC POTION.

Take of white soap (the outward part being pared off), one ounce; warm lime-water, one quart. Stir them together till the soap is perfectly dissolved.

This, by its penetrating and alkaline virtues, is intended for the gravel and stone, which it dissolves and prevents by assimilating the humours, and by absorbing those acidities which form calculous concretions.

COMPOUND SPIRIT OF LAVENDER.

Take flowers of lavender, fresh gathered, a pound and a half; fresh flowers of rosemary, half a pound; fresh outward part of lemon-peel, three ounces; rectified spirit of wine, a gallon and a half. Distil in balneo marie to dryness. In the distilled spirit sleep, for two days, of cloves, cubeb, and shavings of red sanders, each two ounces: then strain out the spirit for use.

POWDER FOR EPILEPTIC AND CONVULSION FITS.

Take flowers of zinc, musk, and facitious cinnabar, of each equal parts; mix them together in a glass or marble mortar. The dose is from three grains to ten and upwards, mixed in a little treacle or honey, every night and morning.

The use of this powder, with dipping children in a tub of spring water every morning, has very often relieved them, when every other remedy has proved abortive.

PURGING POWDERS FOR WORMS.

Take of scammony, calomel, and the best Turkey rhubarb, in powder, of each equal parts; double-refined sugar, the weight of the whole; rub it all very well together in a marble mortar, and keep for use.

The dose for children is from ten grains to twenty-five, once or twice every week. This is preferable to any quack medicine whatever.

A UNIVERSAL POWDER FOR CHILDREN'S DISORDERS.

Take of white magnesia, six drachms; cinnabar of antimony, two scruples; mix them into a fine powder for use.

This powder will not only prevent the numerous disorders children are liable to, but will also remove many, and all that arise from acidities in the stomach.—This is preferable to all other remedies yet known, for children in cutting their teeth, sickness at their stomachs, &c. &c. The dose is from ten grains to half a drachm more or less twice a-day.

POWDER TO PROMOTE DELIVERY.

Take borax in fine powder, castor, cinnamon, and myrrh, of each three drachms; saffron and savin, of each one drachm and a half; mix them and make a powder for use.

A drachm of this powder facilitates the birth, and promotes the lochia and menses.

THE FAMOUS SYMPATHETIC POWDER.

Take of green vitriol eight ounces, of gum tragacanth, reduced to an impalpable powder, one ounce; mix these together, and let a small quantity of the powder be sprinkled on the wound, and it immediately stops the bleeding. The vitriol must be calcined to whiteness in the sun, before it be mixed with the gum.

The above powder, is used by the miners at Gosselaer in Germany, in all their wounds; and, I believe, was never known to fail. This powder, Monsi, Lemery and Sir Kenelm Digby tell us, has also the following wonderful property, that, if it be spread on a cloth dipped in the blood of a wound so as to incorporate with the blood, the wound would be cured, though the patient were miles off, and never saw the medicine. From this remarkable sympathetic property it derived its name.

POWDER FOR A SORE THROAT.

Take one ounce and a half of purified sal ammoniac, and half an ounce of purified nitre, mix them very well together in a mortar for use.

About six or eight grains of this powder is to be frequently held in the mouth, and to be gently swallowed down the throat. This very often answers better than gargles. If necessary, lose a little blood and take a brisk purge before you use the powder.

FOR VOMITINGS, BILIOUS DISORDERS, &c.

Take mint water, syrup of lemons, of each four ounces; salt of wormwood, two drachms. Mix them well together for use.

In vomitings, hiccups, rheumatisms, fevers, and all disorders from a siness in the blood, no preparation can be more innocent nor more efficacious. Two or three table-spoonfuls are to be taken every four or five hours.

DECOCTION FOR CATARRHS, COLDS, &c.

Take of compound stercaceous powder, one ounce; gum arabic in powder, half an ounce; water, two quarts, boil it till one pint of the water is wasted; then add to the turbid decoction, of aromatic water, one ounce and a half; white sugar, half an ounce, and mix the whole well together for use.

This composition will be found immediately useful in destroying sharp corrosive matter in the stomach, and absorbing all acidities in the first passages. Half a pint of it in fevers, colds, or the like disorders, may be taken three or four times every day, blood-warm.

SWEATING DRAUGHT, FOR RECENT COLDS.

Take of the spirit mindereus, four ounces; syrup of poppies, and simple cinnamon water, of each one ounce; volatile salt of hartshorn, half a scruple. Mix them together for two draughts, and take one of them when going into bed, and the remainder the second evening after.

In rheumatisms, pains in the head, and other parts, the above sweating draught will be found to answer every intent.

FOR AN INVETERATE COLD OR COUGH.

Take a large tea-cup full of linseed, two-penny-worth of sick liquorice, and a quarter of a pound of sun raisins.—Put these into two quarts of soft water, and let it simmer over a slow fire till it is reduced to one; then add to it a quarter of a pound of brown sugar-candy pounded, a table-spoonful of old rum, and a table-spoonful of the best white-wine vinegar or lemon juice. The rum and vinegar are best to be added only to that quantity you are going immediately to take; for, if it is put into the whole, it is apt, in a little time, to grow flat. Drink half a pint at going to bed, and take a little when the cough is troublesome.

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This receipt generally cures the worst of colds in two or three days, and if taken in time may be said to be almost an infallible remedy. It is a most sovereign and balsamic cordial for the lungs, without the opening qualities which endanger fresh colds by going out. It has been known to cure colds that have been almost settled in consumptions, in less than three weeks.

FOR A PUTRID SORE THROAT.

Take of the best Peruvian bark, in gross powder, one ounce and a half; Virginian snake root, three drachms; boil them together in three quarts of water to one quart; then strain the liquor, and add two drachms of elixir of vitriol, take a large tea-cupful of it every third hour. To every dose you may add a small quantity of brandy if you chuse it.

The steam of the following ingredients received into the throat through a funnel every hour will do a deal of service.

Take vinegar, one pint; honey, half a pound; myrrh, in powder, half an ounce; boil them well together, and it is fit for use.

Blisters applied to the throat, and behind the ears, are equally as beneficial in this disease, in case the pulse and spirits are very low. If a vomiting continues, take four table-spoonfuls of lemon juice, and put to it one drachm of salt of tartar; white sugar, half an ounce; mint water, three ounces; mix them very well together. The dose is a table-spoonful every hour.—This is the famous saline julep so much approved of by the faculty, as an antidote against vomiting and sickness of the stomach. After the disorder is subdued, the patient should take a few purges of rhubarb, senna, or the like. But, on the contrary, whilst the putrid ulcers remain in the throat, and a violent looseness should come on, it must be checked, by taking two tea-spoonfuls of dia-cordium two or three times a-day.

ALE FOR THE INWARD PILES.

Take half an ounce of black pitch, and boil it in a pint of good ale, till it comes to half a pint, then drink it off blood-warm.

This, though a simple remedy, has proved very effectual in many stubborn cases, where other things of much greater expence have proved abortive.

ALE FOR THE JAUNDICE.

Take one quart of ale, and add to it two ounces of hemlock-seed, and half an ounce of turmeric, in powder; boil them over the fire about a quarter of an hour, then strain it for use.

This may be sweetened with coarse sugar. Half a pint of it at a dose; to be taken every morning.

VOMITING DRAUGHT.

Take of ipecacuanha, in fine powder, twenty-five grains; alexiterial water, half an ounce; compound spirit of laven-

der, half a drachm; syrup of orange-peel, one drachm: mix them for use.

DRAUGHT FOR THE DROPSY.

Take of peppermint water, one ounce; simple cinnamon water, half an ounce; spirituous cinnamon water, two drachms; thebaic tincture, forty drops; lye of tartar, half a drachm; syrup of marsh mallows, one drachm: mix them together for a draught.

This is the medicine which cured a person labouring under an ascites and tympany at the same time, where the pain was very severe, attended with great thirst, and thick, high-coloured, urine, rendered in small quantities. The strong purges increased the distemper. Soap, lixivial salts, balsam of gilead, nitre, and the like, all proved abortive. This draught brought unexpected relief, by procuring rest, and causing a copious discharge of water. By repeating the medicine for some time, every eight hours, and then only twice a-day, and afterwards using corroborants, or medicines that produce strength of body, &c. the cure was perfectly completed.

FOR CONSUMPTIONS.

Take leaves of comfrey the greater, Solomon's seal, and pimpernel, each four handfuls; liquorice root, two ounces; infuse them cold for twelve days in two gallons of lime-water, and take off the clear liquor for use.

This is very easily made, and is much better than if it were to be distilled. It is of excellent use in such consumptions as proceed from a sharp thin blood; especially in those who have been injured by a certain bad disease, or have any hereditary remains of scrophulous or leprous humours. It must be drunk for about forty days together, to the quantity of a quart or two every day, if the stomach can bear so much. It will also be of the utmost service to wash foul ulcers with.

DECOCTION FOR INWARD DECAY.

Take ground-ivy, scabious, and colt's-foot, each two handfuls; hyssop, one handful; elecampane root, one ounce; liquorice, four ounces; agrimony, four handfuls; boil them together in nine quarts of barley-water till they come to about a gallon, then strain it for use.

This pectoral can be depended on in coughs and consumptions of the lungs.

FOR THE ASTHMA, AND SHORTNESS OF BREATH.

Take of the milk of gum ammoniac, six ounces; syrup of squills, four ounces and an half: mix them together.

This promotes expectoration in a very great degree, and relieves those who are short-breathed; it is also justly esteemed for its serviceable properties in asthmatic cases, by rarefying and thinning viscid cohesions in the pulmonary vessels. A spoonful is to be taken four or five times every day, and in particular every morning.

INJECTIONS FOR ULCERS IN THE VAGINA
AND WOMB.

Take quicksilver, balsam capivæ, of each half an ounce: beat and work them together, till the quicksilver is extinguished; then put to the mass, the yolk of one egg: mix them very well together, gradually adding half a pint of rose water.

As well for injections in ulcers in the vagina, occasioned from the corrosiveness of a long continuance of the whites, it is equally as efficacious for a gonorrhœa, particularly if any ulcers be in the urethra. This simple preparation sheaths the excoriated parts from the acrimony of the urine.

ESSENCE FOR THE HEAD-ACH.

Take of French brandy, or rectified spirit of wine, one quart, put it into a strong bottle; and add one ounce of camphire cut small; a quarter of an ounce of essence of lemon; and two ounces of the strongest volatile spirit of sal ammoniac. Stop the bottle quite close, and shake it three or four times a-day for a week.

The method of using it is to rub the hand with a little of it, and hold it hard upon the part affected until it is dry; if the pain is not quite relieved, repeat it till it is.

COMPOUND TINCTURE OF SENA, COMMONLY
CALLED DAFFY'S ELIXIR.

Take of the best sena, two ounces; jalap, coriander seeds, and cream of tartar, of each one ounce; coarse sugar, three quarters of a pound; brandy, three pints; let them stand for ten or twelve days; then strain off what is fine for use.

This is an agreeable purge, and nothing can be more useful than to keep it ready-made for family use.

GODFREY'S CORDIAL.

Take seven gallons of water, raspings of saffras, and anniseeds, of each four pounds; powder of caraway seed, eight ounces; opium, six ounces; coarse sugar, fifteen pounds; boil them all together, till one half the liquor be evaporated: then strain it through a coarse bag or cloth, and add three gallons of spirit of wine rectified.

STOUGHTON'S BITTERS.

Take gentian root, two ounces; dried orange-peel, two ounces and a half; cochineal, half a drachm, in powder; proof spirit, or brandy, two pounds; let them stand ten or twelve days, and decant off what is clear for use.

PRIAR'S BALSAM, COMMONLY CALLED TUR-
LINGTON'S BALSAM OF LIFE.

The true and best method of making it: take gum benjamin, twelve ounces; gum storax, eight ounces; balsam of Tolu (or Peru), four ounces; succotrine aloes, two ounces; rectified

spirit of wine, five quarts and a pint; let them stand to digest twelve or fourteen days, then decant for use.

PILLS FOR GIDDINESS, PALSY, HEAD-ACH, &c.

Take native cinnabar, levigated, two drachms; castor, and salt of amber, of each one drachm; oil of marjoram, fifteen drops; balsam of Peru, one drachm; syrup of piony, a sufficient quantity to make the mass, and form nine pills out of every drachm of it. The dose is three of them to be taken three times a-day.

PASTE FOR THE FISTULA, PILES, &c.

Take a pound of elecampane root, three pounds of fennel seeds, and one pound of black pepper; let these be made into a very fine powder, separately; take two pounds of honey, and the same quantity of sugar in powder: melt the honey and sugar together over a gentle fire, scumming them continually, till they become as bright as amber: when they are cool, mix and knead them into your powders in the form of a paste.

The dose is the size of a nutmeg, morning, noon, and night. This has been found a specific for the fistula, piles, &c.

FOR THE WHOOPING COUGH, BY THE ROYAL
COLLEGE OF PHYSICIANS.

Take flowers of benjamin, and strained opium, of each two drachms; camphire, two scruples; essential oil of aniseed, half a drachm; rectified spirit of wine, one quart: digest, and strain off the elixir.

This is original from Le Mort, and was published by Quincy, with four ounces of liquorice, and four of honey, which the college have omitted. It is anodyne and diaphoretic, and greatly contributes to allay tickling coughs, to open the breast, to give freedom of breathing, to cure an asthma, but particularly the WHOOPING-COUGH IN CHILDREN. The dose for children is from five drops to twenty; and, to grown persons, from twenty to hundred, at night and morning, in Malaga wine.

Dr. SMITH'S PRESCRIPTION FOR THE WHOOP-
ING COUGH.

Take of the musk julep, six ounces; paregoric elixir, half an ounce; volatile tincture of valerian, one drachm: mix them, and take two spoonfuls three or four times every day.

Take milk of gum ammoniac, and of small cinnamon water, of each two ounces; tincture of castor, two drachms; syrup of balsam, half a drachm: mix them, and administer one spoonful presently after.

Towards the decline of the disease, a decoction of the bark, in full doses, may be prescribed to advantage.

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In the HERBAL.

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CULPEPER'S ENGLISH PHYSICIAN,

AND COMPLETE

H E R B A L,

Of the natural APPROPRIATION of HERBS in the CURE of all
DISEASES.

THE temperature, virtues, and use, of Plants, as serving to heal or sustain the body in health; as also their dangerous qualities, and the remedies against them; are well worthy our enquiry. This speculation is divided into two parts. 1. Therapeutic or curatory. 2. Threptic or alimentary. In both which, vegetables may be considered according to their substance and consistence, or else according to their accidents.

I. According to their substance or consistence, they are, 1. Thin or gross. 2. Lax or constrict. 3. Clammy or brittle. 4. Heavy or light. Tenuity of parts is in those things which are aërious in essence and substance; which, being subtile, do easily communicate their virtue unto any liquor, and are of easy distribution in the body, easily actuated, and not long abiding; and is in matter not much compact, but easily divided by natural heat, having little of earth, and that mixed with much humidity, or elaborated by fiery heat, as in things very acid, sharp, and friable for the most part. Crassitude of parts is in those things which are terrene; which, being more gross, do not quickly communicate their virtues unto liquids, and therefore the virtues thereof are exerted in the stomach, and seldom or ever pass unto the liver; and

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such

such have much matter, as in mixtures very terrene, or exquisite mixtures of the aqueous humidity and terrene, without much prevalency of heat, so for the most part are austere, acerb, sweet, bitter, salt, and few insipid. Rarity is in dry bodies : hardness in the dry and terrene. Clamminess in moist bodies : brittleness in dry. Heaviness in thick bodies : and lightness in the rarefied. Tenuity loosenseth and penetrateth ; crassitude obstructs ; softness lenifies and conglutinates ; and hardness resisteth and dryeth up.

II. According to their accidents, they may be taken notice of, as medicamentous and alimentary. 1. As medicamentous, and so according to their immediate and more remote accidents. 2. According to their more immediate, i. e. the qualities, and way of finding them out.

The Pototetology, or qualities, first, second, third, and fourth. The first are, Calidity, or heat, which causeth motion, and disposeth the parts by a right conjunction and situation thereof. It heateth, subtilizeth, digesteth, openeth, muturath, and rarifieth, and causeth agility : if excessive, it doth not ascend, inflame, attract, or disturb, as *thapsia*, &c. 2. Frigidity, or coldness, doth cool, conjoin, inspissate, and hinder digestion, by the obtrusion of calidity, and by shutting the passages hindereth distribution : also, if excessive, it so filleth that it expels the juice, coagulates, and congeals, as poison, &c. 3. Humidity, or moisture, is of easy separation, lenifying and lubricating : if excessive, it burdeneth the spirits and loadeth the same : and, if aqueous, it causeth nauseousness, and suffocates the excitation of heat, causeth flatulencies, oppilations, slowness of action, and debility of motion, in all the parts : otherwise it lenifies, lubricates, loosenseth, maketh the blood and spirits more gross, and obtunds the acrimony of humours, as mallows, &c. 4. Siccity, or driness, doth colligate and bind, and causes a stronger disposition of the body : if excessive, it constringeth the passages and hindereth the excretion, presses forth the juices out of the body, and causeth tabefaction : if in the last degree, it consumeth moisture, causeth interception, suffocation, and death, as cresses, &c. Here the degrees are four. The 1st scarce sensibly altereth the body. The 2d manifestly, yet without trouble or hurt. The 3d vehemently, but without corruption. The 4th most violently, and with great hurt unto the body. In each of which degrees there are three mansions acting remissly, intensely, or in a mean ; or in the beginning, middle, or end, thereof.

The chemists, instead of these four qualities or elements, substitute, 1. their Sal, from which is all sapour or taste, which is as it were the ashes of a body ; for salt is a dry

dry body, defending mixed bodies from putrefaction, of excellent faculty to dissolve, coagulate, cleanse, and evacuate; from which ariseth all solidity of body, denominations, tastes, and many other virtues analogous to the earth, as being firm, fixed, and the subject of the generation of all bodies, and is therefore called by chemists, *Sal, sal commune, acerbum & amare, corpus, materia, patiens, fixum, ars, scusus materiale.*

2. Sulphur, whence all odour or smell ariseth, and is like the flame; or sulphur is that sweet balsam, oily and viscid, which preserves the natural heat of the parts; the instrument of all vegetation, accretion, and transmutation, and the original of all smells, both pleasant and unpleasant: therefore it is compared to the fire, easily receiving the flames, as all oily and resinous bodies do: also it lenifieth and conglutinates or conjoineth contrary extremes, as Sal and Mercury, that being fixed and this volatile, it participating of both extremes, so it tempereth the driness of Salt and moisture of Mercury as being viscous; the density of Salt and penetration of Mercury by its remiss fluidity, and the bitterness of Salt and acidity of Mercury by its sweetness; therefore it is called, *Sal Petre, dulce, anima forma, agens, inflammabile, natura, judicium, & spirituale*, by the chemists. 3. Mercurius, whence is all colour, and is represented by smoke or fume; or Mercury is that acid liquor, permeable, penetrable, etherious, and most pure, from which ariseth all nourishment, sense, motion, strength, colour, and ratardation of preproperant old age; so it is compared to the element of air and water: to the first, as being turned into vapours by the vicinity of heat; and to this, as being hardly contained by its own term, but easily in some others: or it is that essential body, that by its aerial, most subtle, vivific, and spirituous, substance, is the pabulum of life, and the proximate instrument of the essence or form, and is called by chemists, *Sal ammoniacum, acidum, spiritus, idea, informans aut movens, vaporosum, intelligentia, intellectus, gloriosum!* Also Mercury containeth a sulphureous and saline substance; Sulphur a salt and mercurial, and Salt an oleaginous and material; and the phlegm and caput mortuum are not principles, but their integuments, and without all Hippocratic virtue; the first being only moist, the other dry and emplastic. Also if Mercurial acid and sharp vapours abound, there ariseth the epilepsy, apoplexy, palsy, and all kinds of catarrhs and defluxions, and epidemic and contagious diseases if venomous. Sulphur, if abounding, causeth inflammations and fevers, and the narcotica soporiferous diseases. Salt exuperant causeth corrosions, ulcers, heat of urine if dissolved, and tumours if coagulated. Thereto belongs Tartar, causing the stone, gout, &c.

The second qualities are, 1. The malleatic or mollifying, to which the ecquetic or suppurating hath affinity; for both have an equal and symmetric heat, and a correspondent siccity, yet differing in mode. The suppurating doth produce heat

most like unto that of the body, without any consumption or addition of humidity. The emollient ascends heat a little beyond the proportion of nature, and contracts a little humidity, wherefore that rather operates by quantity than by the quality of heat, but the emollient rather by quality. Therefore that which is exactly suppuratory is emplastic; yet sometimes emolition is the consequence of humidity, if joined with moderate calidity or heat, and is useful in scirrhuses and tumors; and, though emolition may be by humectation and evacuation, yet it is properly by healing, loosening, and callignation. Emollients being moderately dry and hot, 20 or 30 in scirrhuses, and proportionably in other tumours. Hereto belongs the calafic or loosening; yet this is less hot and more moistening than the emollient, and of a thin substance. 2. Sclerotic or hardening, which properly is that which doth exsiccate without any excess of heat or cold; for cold also may make obdurate, as also too much heat, after another manner than only by exsiccation, for, though that which is dry is hard, yet all that is hard is not dry. But siccity doth dry and indurate two ways; i. e. by altering and making more dry the essence of the parts, which is most properly; or by consuming the humours in the pores; yet sometimes obduration may also be caused by repletion or fulness; and, some say, by cold and driness. 3. Aromatic and rarefying, or diaphoretic and resolving, which are moderately hot, with tenuity of parts, and very little resiccant or drying, for excessive heat doth not rarefy but burn, and by adustion doth condensate and dry. But moderate heat openeth the passages, and deeply penetrateth by the tenuity of its substance, and easeth pain; also it openeth the pores and attenuates the substance. The proper diaphoretics are hot, dry, and of thin parts, attenuant, mollifying, and discussing wind; and the rarefacient moderately hot, like our own heat, moistening and of thin parts. 4. Pycnotic or condensating, contrary to the rarefacient, contracting the pores, and incrassating what is rarefied and humid, and making it more solid, which is in those things which refrigerate, yet are not terrene, or aerious, but aqueous, and are not at all or but little astringent; for these do weakly contract and bind, i. e. by reason of their softness. 5. Anatomic or aperient, opening the mouths of the vessels, and is in those things that are of gross parts, hot beyond the first degree, sharp, and biting. 6. Stegnotic or binding, contracting occluding, and constringing; shutting the mouths of the vessels, and restraining sensible excretion; and is, in those things which are frigid, of gross parts, and without acrimony, as many terrene bodies are: for those things, which ought strongly to constipate and bind, must also have a more strong and renitent faculty; yet some binders are hot and dry, and of thick substance; and others glutinous. 7. Helctic, epispastic or drawing, attracting the humours from the center, and is in those things which are hot and of thin parts: for that which is hot attracteth, and that
more

more strongly which hath a conjunct tenuity of parts; but those moderately attract which are hot and dry in the second degree; if in the third, more effectually; and chiefly those that are so in the fourth: for the attraction is according to the degree of heat, and is either more natural, or by putrefaction. Yet some things attract specifically, and not by a manifest quality: as things that are cathartic or purging, and alexitery or resisting poison. 8. Apocroustic or repercuent, repelling the humours flowing from the center, as in those things which are frigid and of gross parts. For that which is cold repelleth, and, if it hath a crassitude of parts also, it is more violent, as that which is acerbic or austere; yet those things also repel which are astringent, especially those which are helped by the tenuity of their parts: for the thinness of the substance doth much conduce to striction; therefore other things that are strictive, by reason of the crassitude of their substance, cannot easily penetrate the more remote parts, precluding the passages. Hereto may the defensive and the intercipient be reduced, being cold, astringent, and repulsive. 9. Rypitic, abstergent cleansing, or removing glutinous and clammy humours in the superficies, or adhering to the pores of the skin, or ulcers, and is in those things which have power to exsiccate with tenuity of substance; neither is it of any great moment whether they are hot or cold, by reason that neither quality hinders action, except excessive; yet some count them hot chiefly, and dry, with a certain thickness of parts to vellicate the humours. 10. Eccathartic, ecphractic, and expurgatory, or removing obstructions; not only opening the pores of the skin, but the inferior *ductus* of the bowels; as in those things that are nitrous and bitter, although they have some small striction, and by reason of substance do not differ from those that are absterfiv, but in degree; for those things that cleanse the pores and inward passages have a great tenuity of parts, and are moderately hot; as those things which are nitrous and bitter: but those things, which, being outwardly applied to the skin, do cleanse the skin and ulcers from their excrements, are destitute of the strictive faculty; but being taken inwardly, although having a certain striction, yet nevertheless they may purge, and cleanse the greater passages, and withal strengthen the same. Also some things lenify or purge by lubricifying, as fat things; by washing and absterfion, as whey and beets; by compression, as quinces; by extirpation, as things hot, sharp, salt, and of thin parts; and others electively and properly. And emetics cause vomit by relaxation and stimulation, the mouth of the stomach being weak; if the lower part, use dejectories. 11. Leptyntic or attenuating and making thin, as in all those things that are expurgatory, hot, and of thin parts: extenuating gross and tough humours; and are for the most part hot and dry, 2d or 3d, as things sharp and aromatical; yet some are cold, as lemons, &c. but of thin parts. Hereto belongs the temetic, or inciding against viscid humours, which are

more strong. And dissolvers of grumous matter, and coagulated; as also extenuants of fat, hot and dry, 3d, and of thin parts: and the chatastic or laxants, moderately hot, moist, and thin. 12. Emplastick, viscid, or clammy, contrary to the absterfiv; for, being applied, it doth tenaciously inhere in the pores of the skin, fill and obstruct the same, as in those things that are fat and glutinous; as also terrene, wanting acrimony and asperity, or roughness. Hereto may be referred the epicrastic or levigating, helping asperity by being emplastick or moderately moist. And the emplasticks are temperate, without evident heat, cold, or acrimony: some also have a thick terrene essence or consistence, drying without biting; and others aqueous or aerial, and so are tenacious. 13. Emphrastic or obstructing, pachyntic or thickening, which are the same: for, as those things which are detergent and purging do free the pores and passages from obstruction, so these obstruct and fill the same, and make the humours of the body tough and thick; and are cold, or temperate, without any acrimony, and of a thick terrene substance. 14. Anodyne, paregoric, or easing pain, as in those things which have thin parts, and are moderately hot, not much exceeding the temperate, i. e. being hot in the first degree, and rareficient; so evacuating, digesting, rarefying, extenuating, concocting, and equalizing, whatsoever humour, either sharp, tough, or gross, is inhering in the smaller pores, or grieved parts: and all vaporous crass, gross or cold spirits, not finding way of evacuation; and are moistening, aqueous or aerial, of thin substance, and not astringent. 15. Narotic, or stupifying the parts by its coldness, and not properly mitigating the pain, nor taking away the causes of the grief; yet stupor is somewhat less than insensibility, or the privation of sense: the same also is hypnotic, or somnific, and causeth sleep, being taken, i. e. its subject, which doth vehemently refrigerate, i. e. in the 4th degree; so that it doth not only stupify the sense, but, being liberally taken, causeth death, as opium, and that not only by its exuperant quality, but also by a certain propriety of substance and its concurring essence, its narcotic vehemency being but little repressed by the mixture of hot correcters, though it hath some bitter parts. 16. Amyctic, metasyncritic, or rubeficient, causing redness, contrary to the former, causing pain, as in those things which heat and dissolve unity; of this kind also are escharotics, causing crusts, which are hotter, caustic or burning; not only hot and dry in the fourth degree, but also of a gross consistence, therefore, being fixed in any part, excruciate and torment the same by their stiffness: like unto these are those things that are septic or corrosive, which are vehemently hot and dry, but of thin parts and consistence; which therefore, with a little pain and biting, or else without any sense of pain, eliquate the part, and are called also putrefactives: hereto also belong the psilothra, extirpating the hair; and vesicatories, very hot, and of thin parts.

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The third qualities arise from the mixture of the first and second, and are, 1. The Ecpuetic or suppurating, turning into matter confused flesh and humours remaining in swellings, as in those things which are moderately hot, and next unto emollients, yet differing in this, that they have also an emplastic faculty, obstructing the pores, increasing the substance of heat, and not intending the quality; and are also called peptics or maturatives. 2. Sarcotic or generating flesh, as in those things which produce flesh in hollow ulcers, and fill the cavities, and are hot in the first degree, a little deterfive, and that without biting and astringtion. Also moderately drying, viz. under the second degree. And such as impinguate, or make far, are heating, nourishing, impulsive, attractive, retentive, or specific; as the seed of hemp, kernel of the Indian nut, and powder of charcoal. 3. Colletic or conglutinating, as in those things which dry in the second degree, and are in a mean as to those which generate flesh, and cicatrize; they are not absterfive, but astringent, and prohibit the flux of humours to the lips of wounds, ulcers, and fistulas; they are also called symphytics, traumatic, and enaima; and are temperate, and of a thick substance, stronger or weaker according to the person or part. 4. Epulotic or cicatrizing, as in those which greatly dry and bind without biting, drinking the humidity of the flesh, and contracting the same, and covering with a thin callus-like unto the skin; therefore do more dry than incarnatives or glutinatives, for they bind, contract, constipate, and indurate; and are of thick substance, and cold: there is also a sharp and biting epulotic that consumes dead flesh, called cathairetic, and a third drying without astringtion. 5. Porotic or generating callus, by which broken bones are ferruminated and knit, and is neither bone nor flesh, but betwixt both, being a hard, dry, white, body; to the generation of which are required a convenient diet, and medicines applied which are emplastic and moderately hot, drying, thickening, hardening, and binding. 6. Diuretic or provoking urine, as, 1. In those things that are moist and liquid, and of a thin consistence, and easy penetration, encreasing the quantity of urine; so operate by accident. 2. In those things which purge and attenuate, and open the passages, some of which are cold, and of thin parts; sometimes expelling what sticks in the passages: which operate after a middle way, sometimes by accident, tempering exuperant heat which seizeth on the veins and resolveth the serous humidity, that the humours may be more easily attracted by the reins, and descend by the bladder. 3. In those things which purge the passages, and open the same, extenuate gross humours and the blood, and separate what is extenuated from the more gross parts: which the reins then easily attract and send away by the urinary passages; which kinds of diuretics are very hot and dry, to wit, in the third degree, sharp, and of a very thin substance, coactive

coëctive and separating. 7. Lithontriptic or breaking the stone, dissolving and expelling the gravel, as in those things which are diuretic, hot, dry, and of thin parts; sharp, but more remissly, and somewhat bitter. Also some do it by incision and detersion, without much heat; some by asperity; and others by occult property. 8. Emmenonagoric, or drawing out the terms, as in those things which are hot and of thin parts, that they may concoct and digest crude humours, extenuate and incide the gross and rough, and remove obstructions by cleansing the passages: such as are all proper diuretics: which also promote the expurgation of the menses; and, if they are also stinking or bitter, they are more effectual: stinking things depressing the womb, and the bitter being purging. There are also accidental hysterics; as those which are analeptic, or strengthening after extenuation; or which refrigerate and humect the body dried by too much heat: to these also have affinity those things which expel the secundine and dead-birth; especially those which are more strong, i. e. hot and of thin parts, stinking and bitter with acrimony, especially if taken in a great quantity and often. The proper are hot 2° or 3° , and dry 1° or 2° , of meanly gross substance, and bitter with acrimony: the contrary are the astringents. 9. Bechic, or helping the cough, as in those things which cause or stop the same: for those things which conduce much to the expectoration of gross humours do also cause coughing; but, on the contrary, those things which much incrassate thin humours stop and ease it: but those things are hot and of very thin parts, and extenuating, which expectorate tough humours; yet there are other things which in some measure purge the breast, not much hot, nor very dry, but only a little moistening, or at least lenifying what is exasperated; yet all diuretics of the middle kind also are agreeable to the breast and lungs; which, if they are cold, incrassate the thin humours and stop coughing, especially those kinds that are narcotic, or stupifying. 10. Galactogenetic, or generating milk, as partly in meats, partly in medicines: as for meat, it is such as is euchymic and polytrophic, or of good juice and of much nourishment, and a little hotter and drier if the blood be cold and pituitous; but more moist and less hot if troubled with choler. Medicaments causing milk are of thin parts and hot, and of affinity to those things which properly provoke urine, yet most gentle; but those things which are more strong, and provoke the courses, hinder the generation thereof by too much eliquation of the humours. Also things too cold, thickening, digesting, or drying, hinder the same. 11. Spermatogenetic, or generating sperm, as in those things which are hot, and not very dry, but flatulent, as also aliment of good juice, and whatsoever increaseth the quantity of blood. Also it is stimulated by things that are sharp, and hindered by things very cold and discutient. 12. Hydrotic or pro-

working sweat, as in things of thin parts, and hot; yet some are astringent and cold, working occultly. Also the cosmetic, for the skin, is extenuating, laxative, emollient, cleansing, and discussing; for the teeth, cleansing and binding; for the hair, healing, drying, and binding; for scurf, cleansing and discussing. Note, as for the pharmlc or sternutatory quality, it is in those things that are acrimonious, causing an irruption of the expulsive faculty; as errhines, that are hot, nitrous, extensive, and sharp; as white pepper, hellebore, ginger, pellitory of Spain, castor, cloves, sneeze-wort, and euphorbium finely powdered. Also the apophlegmatic is in things hot and acrimonious; yet sometimes do it occultly, as in mastic, raisins, hyssop, organy, marjoram, pellitory of Spain, ginger, white and black pepper, and mustard-seed. The sclerobrotic is in things bitter and sharp, &c. as wormwood, coraline, &c.

The fourth qualities are such as follow the substance or property of the essence, and are found out only by experience; and are therefore called occult, latent, and specific; as in poisons, theriac and alexipharmic remedies, roborating the expulsive faculty, and being contrary, emplastic, astringent, emetic, cathartic, and sudorific, with phlebotomy if need; amulets and cathartics, things antipathetic and sympathetic, as also appropriate to any part, or adverse unto the same; the greatest sign of which, according to some of the most learned authors, is signature. The poiotechnology, or way of finding out these qualities, is by manifest reason. 1. By osmology, or odour or smell, which is either sweet, familiar unto the spirits of the brain, and a sign of heat, or stinking and offensive, cold and moist; the first is in hot bodies, of thin parts, among which there is difference according to the degrees thereof; but those things which are without odour are of a gross essence and humid, as those things which are salt and austere; also such things as are of a mordicant and bitter smell are hot, but those that smell like vinegar and acerb are cold, for in some things the sense of odours is like that of saps, yet not of so safe conjecture, by reason of the inequality of substance; for most bodies are of an unlike consistence, of each of which parts odour sheweth not the temper, but where there are tenuous effluvia or vapours, whereof the sweet strengthen the heart, the rank excite the animal spirits, the stinking help the suffocation of the matrix. 2. By chromatology, or colour, which is either, 1. Lucid, exciting the animal spirits, and drawing them outwards, as the white. 2. Or tenebrose, calling them inwards, and causing sleep, as the black. 3. Yellow, helping the jaundice. 4. Green, useful for the eyes: the white and pale shew moistness of temper and imbecility. The yellow proceed-

eth from heat. The red and croceous, &c. shew excessive ficcity and calidity or heat. The green and porraceous are signs of much moisture. Also to the white may the candid be reduced; to the yellow, the luteous, wax-coloured, croceous, golden, honey-coloured, citron, fox-coloured, and vittelline; to the red, the light red, flaming, and sanguine, colour; to the purple, the violet, flesh-colour, and brunous; to the green, the prassive, herbaceous, enginous, and porraceous; to the sky-colour, the horn-white, grey, gristed, black, and blue, ash-colour, pale, and murry; to the black, the dark. 3. By geuthmology, or fapors, or tastes, which, according to some, are, 1. more perceptible or manifest; as the simples, which are, 1. hot, first more hot, and so first of more thin parts, as the sharp, secondly, of more thin parts, as the bitter, nitrous, and salt; secondly, less hot, as the sweet, and is diverse according to the diversity of tenuity and humidity. 2. Cold, first of gross terrene parts. First, more gross as the acerb: secondly, less gross, as the austere and astringent. Secondly, of subtile aqueous parts, and doubtful, as the acid. Thirdly, the mixed, as the vinous, compounded of the acid and sweet. 2. Less perceptible, and almost insipid. 1. Aqueous, first more subtile, as the acquinspid; secondly, more gross. First, glutinous, as the humilent; secondly, fat, as the oleous. 2. Terrene: 1. succulent, as the adorous; 2. more dry, as the ligitereous. The fapors or tastes are,

I. ACTIVE. 1. Bitter, wormwood-like, gallish, saline, or aloetic, which is contrary to the nature of living creatures, the taste whereof doth vellicate the tongue. It consisteth of terrene combust parts, of which, some are more subtile: others, more gross and terrene, exsiccated by exuperant heat, or coagulated by cold, as appears in opium and aloes. It is not nutritive, it openeth the mouths of the veins, causeth hemorrhages, and thirst, and makes the blood fluxible: it attenuateth, incideth, biteth, exasperateth, cleanseth, melteth, attracteth, yet more moderately drieth and heateth; it consumeth and resisteth putrefaction, drinking up supervacaneous humours, and resisting sweetness: it is hot and dry in the second degree, *terra usta*. 2. Sharp, aromatical, biting, septic or arsenical, hot, dry and burning, pricking the tongue, and biting the mouth; it consisteth of thin, dry, and hot, parts, as pepper, onions, &c. If it be not vehement, and hot under the third degree; taken inwardly it doth penetrate, open, and attenuate, thick humours: applied outwardly, it rarefieth the skin, and draweth forth humours: if it be hot above the third degree, it troubleth the head with thin vapours: if it be of a more gross essence, it is caustic, and causeth blisters and scabs: and, if it be of an adverse substance, it is septic and deadly: also it is of quick operation,
and

and strong; it attracteth from remote parts, it separates, corrodes, incideth, heateth, burneth, and inflameth; it resolveth, discusseth, excoriateth, exulcerateth, and strongly inciteth to expurgation; if of more thin parts, it is diuretical; if of thicker, caustic: it is more intense in drier bodies, and more remiss where there is an aqueous humidity. It is hot and dry, *ex aqua & terra attenuata*. 3. Acid, or ammoniacal. It penetrateth the tongue with its tenuity, yet without any manifest heat. It consisteth of tenuous, cold, and dry, parts, as vinegar, the juice of lemons, &c. It penetrateth and insideth no less than the sharp sapor, therefore it incideth, attenuateth, biteth, detergeth, referates obstructions, repelleth, and drieth: and, by reason of its penetrating coldness, it repels all fluxions; and by its siccity stops all eruptions of blood. Also it helps nauseousness, corrodes and condensates without heat: it exasperates and resists putrefaction. It is of doubtful qualities, fiery and aqueous, hot and cold, and of all contraries. It is cold and dry in the second degree, *aqua ignita cum balitu terreo*. 4. Nitrous, which is in a mean between salt and bitter; yet weaker than this, and more intense than the other: it is biting and corroding, as nitre. It openeth the belly, and purgeth the reins, *terra spiritibus compulsa*. 5. Salt, or ferous. It corrodeeth the tongue by exsiccation, yet heateth not much: it consisteth in a mean matter with heat and driness, and is generated of that which is terrene and dry, attenuate and preassate by heat with an aqueous humidity, so not altogether terrene, as salt: therefore it contracteth the pores, incideth, detergeth, digesteth, and drinketh up humidity, by its driness, without any manifest sense of heat, and so resists putrefaction. It openeth, biteth, exasperateth, abstergeth, cleanseth, troubleth, provoketh to expulsion, purgeth, subverteth, the stomach, causeth thirst, drieth, deobstructeth, aggregateth, condenseth, roborateth, and contracteth. It is hot and dry in the second degree, and corrosive. 6. Sweet, fat, honey-like, or saccharine. It dilateth the tongue, and is pleasant, having no exuperant quality, and being in a mediocrity, as sugar and honey; therefore it levigates what is exasperated, lenifies, maturates, concocts, is anodyne, and only nourisheth; also it digests, rarefies, distributes, looseth, filleth the liver, stoppeth the spleen, and is hot and moist in the first degree, and of terraqueous parts. 7. Acerb, astringent, pontic, or aluminous. It contracteth the tongue, and doth unequally exasperate the same by exsiccation; it is near to the austere, but more troublesome to the tongue, astringent, cold, and dry. The matter thereof is terrene and dry, without any manifest moisture, in which coldness is exactly predominant with siccity, as services: therefore as cold it repelleth fluxions, as astringent it stoppeth the force of humours; as dry, it doth coarctate, condense, and cicatrize wounds; as terrene, it in-

crassates.

crassates humours, and condensates the superficies; it shuts, corrugates, and indurates, so the austere. It resists poison, and is cold and dry in the second degree. 8. Austere, styptic, astringent, or vitriolate. It moderately bindeth the tongue and mouth, coarctates the same with a certain asperity, and doth in some measure refrigerate and dry. It consists in a mean matter, participating of that which is terrene and watery, in which frigidity is predominant, as medlars and wild pears, &c. It manifestly refrigerateth, extinguisheth, bindeth, and contracteth, moderately stops fluxions, and repelleth. It is subacerb, less cold and dry, and exasperating, stopping, roborating, and indurating, *terra spiritu-commota*, as vitriol. The astringent is weaker, as quinces. Mat. Med. ficc. crass.

II. MEAN. 1. Oleous; it is fat, unctuous, and temperate; generated of that which is moist, aerious, and moderately hot, by elaxation of the watery part, whereby it becomes more aerial, as oil. It is slow and weak in operation, stopping the gustic or tasting organs. It doth humect, lenify, and soften, loosen, obstruct, and cause flatulencies and nauseousness, having a certain obscure and remiss sweetness, and mean substance. 2. Humilient: the matter thereof is gross, tough, aqueous, in which the earth, being well mixed, causeth corpulency; and it is humid, little affecting the taste, more gross and crude than the sweet. It is emplastic, stopping the passages, conglutinates what is disjoined, lenifies what is exasperated, and doth incrassate, as mucilages, &c. Mat. crass. frig. obscure. 3. Acquinspid. It is scarce perceived by the tongue, hardly participating of any terrene siccity, and consisting in a crude juice; it is rather a privation than a sapor: its matter is somewhat gross, yet not altogether terrene, dry, or astringent, but moistened with a certain humidity, which also is not exquisitely mixed by the activity of heat, as water. It is emplastic, stopping and obstructing, lenifying what is exasperated, and conglutinating that which is disjoined: and, although it hath some affinity to sweet, yet it differeth in this, that it consisteth in a matter a little more gross and crude: it refrigerateth, and doth more moisten, i. e. from the second to the third degree.

III. PASSIVE. 1. Ligniterreous, which is more gross, altogether terrene, and unactive; yet it hath some heat, spirit, and humidity, but exceeding little, as the *caput mortuum*, and dry bodies without juice. Mat. crass. *terra absque spiritu depressa prorsus terrea*. 2. Adoreous, most agreeing to our nature, it recedes from sweetness in this because its matter, being unactive, is hardly perceived, and it is more gross; yet well tempered to a terrene equally-mixed siccity, which easily be-
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comes passive, and is apt for distribution and solidity, as bread, corn. *Materia equalis receptibilis*. 4. By Aphelogy, or the tactile quality or touch : so crassitude is a sign of the abundance of the terrestrial parts, or humid and congealed : tenuity of the fiery and aerious : density of exsiccation or congelation ; rarity of driness, hardness of ficcidity and earthiness, except caused by the repletion of humours : softness of humidity : gravity is the companion of density : levity of rarity ; claimminess of humidity ; aridity of friability of ficcidity ; smoothness of an aerious or aqueous humidity ; asperity of ficcidity. 5. By allotofology, or disposition, or mutability : so, that which the soonest receiveth heat is counted hot ; and that most cold which is soonest congealed. 6. By pepeirology, or age ; so, for the most part, those things that are young, more humid ; the old, more dry ; also, whilst they are growing and immature, they have an austeritiy and acerbity ; so, cold. 7. By phyteuteriology, or the place of growth ; so, plants growing by lakes are for the most part of a cold and moist temperature ; the marshy, cold and somewhat dry : the fluviate, dry and very hot : the marine, cold and dry ; those of a fat soil, are hot and moist, or temperate therein ; those of an hungry ground, hot and dry : those of a mean earth, tepid and suitable to man's nature ; those of a sandy ground, hot and dry, and of thin parts ; those of a doubtful growth, are of a mixt temperature ; the amphibious, if growing in springy places, cold and dry ; if in litoral and marine, hot and dry ; the mountain plants are dry, hot, and of subtle parts ; the field, moderately hot and dry ; those that grow in hollow places are cold and moist ; the hilly, temperate ; those that grow wild are colder and drier than the domestic ; if of the same species, the domestic are milder and more weak. 8. By protergasiology, or the operations of the first four qualities, as above-said. 9. By experience, which in certitude exceeds all the rest, and must be made with a simple body, without any external quality, and that in a temperate subject ; in all which, that must be distinguished which is done *per se* from that which is *per accidens*. Thus of the way of finding out the manifest qualities, i. e. of the first ; after which the second are known, as arising from the first ; but especially by sapor or taste.

Now follow the occult qualities ; which are discovered, I. By phytognomy or signature, i. e. phytoptical or external, either in form, colour, or property ; as representing the parts of man's body, the humours, or diseases ; and so the appropriations are as follow. For the head in general : walnuts, piony, poppy, squills, larch-tree, its agaric, and turpentine, Indian nut, and flowers of the lily of the valley. For the brain : wood-betony, sage, rosemary, lavender, marjoram, primroses,

roses, cowslips, bear's ears, lilly of the valley, and misletoe. For restoring hair : quinces, moss, and maiden-hair. For the eyes : fennel, vervain, roses, celandine, rue, eye-bright, clary and hawkweed, herb Paris, grains, and anemony. For the ears : affarabecca, ground-ivy, ivy, poplar-tree, nightshade, sow-fennel, and sow-thistle. For the nose : wake-robin, flower de luce, horse-tail, shepherds's purse, willow, bistort, tormentil, cinquefoil, and sow-bread. For the mouth in general : medlar, mulberries, mints, purslain, and golden-rod. For the scurvy : scurvy-grass, small houseleek, aloes, fumitory, and cresses. For the teeth : Pine, pomegranate, mastic, master-wort, coral, coral-wort, rest-harrow, henbane, and wild tansey. For the drinefs of the mouth : flea-wort. For the diseases of the throat, roughness, quinsy, king's evil, &c. throat-wort, date-tree, winter-green, horse-tongue, fig-wort, archangel, fox-glove, orpine, pellitory of the wall, wheat, barley, garlic, liquorice, fig-tree, hyssop, ragwort, plantane, columbines, cudweed, and Jew's ears. For shortness of breath, coughs, expectorations, hoarseness, &c. elecampane, almond-tree, vines, reeds, sugar-cane, jujubes, sebestens, scabions, coleworts, nettles, and turnips. For contracting women's breasts : lady's mantle and sanders. For breeding milk : anniseed, nigella, mallow's dill, rampions, perriwinkle, and lettuce. For swollen breasts : fennel-giant, gourds, basil, beans, lentils, and lilies. For sore nipples : dock-cresses. For the lungs, stoppings or consumptions thereof, &c. horehound, lung-wort, tobacco, sun-dew, hedge-mustard, colt's-foot, wood-bine, mullein, cowslips of Jerusalem, fanicle, polypody, whortleberries, and sweet Cicely. For the heart, qualms, faintness, &c. angelica, saffron, borage, violets, strawberries, wood-forrel, balm, marigolds, swallow-wort, goat's rue, viper's grass, pomecitrons, gentian, scordium, burnet, avens, cloves, clove-gillyflowers, lignum aloes, cinnamon, and viper's bugloss. For stitches and pains in the sides : carduus benedictus, our lady's thistle, camomile, sweet trefoil, melilot, oats, valerian, stitch-wort, flax, and linseed. For purging the stomach : wormwood, myrobolans, groundsel, radish, black alder, oily nutben, fena, daffodils, white hellebore, and purging cassia. For breaking wind : carraways, cummin, camel's hay, ginger-galanga, cardamoms, pepper, nutmeg, coriander, and orange. For cooling and strengthening the stomach : apples, pears, peaches, apricots, plumbs, cherries, gooseberries, currants or ribes. For the liver : rhubarb, turmeric, agrimony, liverwort, succory, alecost and maudlin, docks, forrel, beets, smallage, cleavers, and chickweed. For the dropsy : elder, foldanella, briony, mechoacan and jalap, broom, ash, ague-tree or saffrafras, palma Christi or great spurge, glasswort, spurge laurel, toad-flax, and bastard marjoram or organy. For the spleen : dodder, black hellebore, tamarinds, spleen-wort or miltwaste,

miltwaſte, hart's tongue, fern, capers, tamarisk, germander, calamint, poley mountain, and lupines. For the reins, bladder, ſtone, and ſtranguary, &c. aſparagus, parſley, marſhmallows, goat's thorn, ſpikenard, ſweet ſmelling flag, cyprus or Engliſh galingale, hops, knotgrafs, parſly-pert, faxifrage, dropwort, gromel, onions, winter-cherries, dog's grafs, butcher's broom, chervil, brooklime, hawthorn, lemons, cyprus-tree, kidney-wort, kidney-beans, oak, buck's-horn plantane, ſamphire, fraxinella, and alheal. For the cholic: bay-tree, holly, juniper, olive-tree, colloquintida, and bindweed. For the worms: centaury, lovage, tanſey, lavender cotton, carrots and parſnips, ſpignel, biſhop's weed, Engliſh worm-ſeed, leeks, and horſe-radiſh. For looſeneſs, the bloody flux, &c. ſhumach, myrtle, ciſtus, blackthorn, bramble, teaſel, rice, flixweed, pilewort, and water-betony. For provoking luſt: artichokes, ſea-holly, potatoes, ſkirrets, peaſe, rocket, muſtard, cotton, ſiſtic-nut, cheſnut, chocolate, ſatyrians, and dragons. For abating luſt: agnus or the chaſte-tree, hemp, water-lily, hemlock, camphire, and tuſſan. For provoking the terms: mugwort, pennyroyal, ſouthernwood, ſavory, thyme, alexander, and anemony. For ſtopping the terms and the whites: comfrey, mouſear, yarrow, mede-ſweet, adder's tongue, lunaria, trefoil, money-wort, darnel, flower-gentle, blites, dragon-tree, beech-tree, and haſel-nut tree. For the mother: mother-wort, feverfew, calamint, burdock, butterbur, orach, aſſa-foetida, and cow-parſnip. For expediting childbirth: birthwort, mercury, madder, ditany, dittander, pepperwort, holm-oak, and its chermes. For expelling the dead child and after-birth: ground-pine, ſavin, and birch-tree. For ruptures or burſtneſs: rupturewort, thoroughwax, Solomon's ſeal, baſam-apple, dove's foot or crane's bill, and elm. For the French pox: guaiacum, china, and ſarſaparilla. For the ſwelling in the groin: ſtarwort, and herb Paris. For green wounds and old ulcers: St. John's wort, arſefmart, bugle, ſelf-heal, ſaracen's confound, looſe-ſtrife, daiſy, and ſpeedwell. For drawing out ſplinters: pimpernel. For felons: woody nightſhade. For ſurbated feet: lady's bedſtraw. For excreſcences: agaric, galls, and other excreſcences of trees. For the jaundice: celandine, ſaffron, and centaury. For pimples, tetters, and ringworms: the bark of the birch-tree, and tree-lungwort. For ſpots: garlic, wake-robin, friar's cowl, arſefmart, and ſpotted lung-wort. For the polypus: the root of the ſmaller celandine, and of polypody. For the ſcab: polypody and ſavin. For yellow choler: as aliment, ſaffron, beets, figs, as medicine, aloes, fenna, wormwood-flowers, ſpurge, coloquintida, and rhubarb, &c. For praſſine choler: thoſe things which have a green and herb-like colour, as blites and orach. For pale choler: briony, having pale flowers. For melancholy: black blite, borrage, bugloſs, &c. For phlegm: gourds and lettuce. For mixed humours: things of mixed colour.

II. Astrological or internal, of which the appropriations are, to the planets.

1. To the Sun, which is a benevolent planet, moderately hot and dry, a friend to Jupiter and Venus, and an enemy to the rest; and as it were the heart of the microcosm, and therefore it produceth the vital spirits thereof, by which the whole universe is cherished; and it is the fountain of peculiar influences, by which it particularly helpeth things familiar, and hindereth what is contrary to itself. It governeth the heart and arteries, the sight cold and moist, and eyes; the sinews and the brain with the Moon, and also with Mercury. Of sicknesses, swoonings, cramps, the ophthalmy, watering eyes, and the cardiac with Jupiter: pimples, heart-burning, tremblings, faintings, tympanies, diseases of the mouth, convulsions, all diseases of the heart, stinking breath, catarrhs, and putrid fevers; it governs the vital faculty, and the taste which is hot and moist: also the attractive virtue with Mars, it being hot and dry, and the digestive hot and moist: under which are, Angelica, ash-tree, bawm, one-blade, burnet, butter-burr, camomile, celandine, centaury, eye-bright, St. John's wort, lovage, marygolds, mistletoe, piony, St. Peter's wort, pimpernel, rosa solis, rosemary, rue, saffron, tormentil, turnsol, viper's bugloss, and walnut-tree: as also all spices, sorrel, wood-sorrel, mallow, borage, marjoram, dittany, gentian, ivy, elecampane, lavender, bay-tree, olive-tree, mints, date-tree: oranges, pomecitrons, thyme, vine-tree, wood of aloes, zedoary, mastic, frankincense, and myrrh.

2. To the Moon, which is a planet in a mean, between good and bad; moderately cold and moist, a friend to Jupiter, Saturn, Venus, and Mercury, and an enemy to the other two; and is correspondent to the brain, and therefore sympathetic with the nervous parts and animal spirits; or it is the generatory of humidity, by which the whole universe is moistened; and is the fountain of peculiar influences, by which primarily and peculiarly it doth affect things familiar to itself, and secondarily things agreeing to Saturn, Jupiter, Venus, and Mercury, as being benevolent unto the same, or (as some) it is as it were the liver of the microcosm. Under it are also the stomach, bowels, and bladder, as some say with Saturn. Of sicknesses, the cholic, phlegmatic imposthumes, all kinds of oppilations, and the epilepsy with Mars and Mercury, the palsy with Saturn, and the menstrual sickness with Venus; also apoplexies, palsies, belly-ach, diseases of the testicles, bladder, and genitals; stopping and overflowing of the terms in women; dropfy, fluxes, all cold and rheumatic diseases, the gout, sciatica, worms in the belly, hurts in the eyes, surfeits, rotten coughs, convulsions, king's evil, small-pox and measles, crude humours, lethargies, and all phlegmatic diseases: also the expulsive faculty, which is cold and moist. Under which are, adder's tongue, cabbages, coleworts, columbines,

water

watercresses, duck's meat, yellow waterflags, flower de luce, fluellin, ivy, lettuce, water-lilies, loofestrice with and without spiked heads, moon-wort, moufear, orpine, poppies, purslain, privet, rattle-grafs, white roses, white saxifrage, burnet saxifrage, wall-flowers, or winter gellow-flowers, and willow-tree; as also chaste-tree, winter cherries, garlic, reeds, brookline, onions, camomile, frogstools, hyssop, mastic-tree, mandrake, nutmegs, walnuts, line-tree, water plantain, turnips, houseleek, and common leeks. 3. To Saturn, which is a malignant planet, diurnal, masculine, and very cold; a friend to Mars, and an enemy to the rest, and answereth to the spleen of the microcosm: yet some ascribe it to the head, as also Jupiter and Mars. Some say also, that Saturn ruleth the right ear, also the bones, fundament, and the retentive faculties, cold and dry in the whole body; and the bladder with the Moon. Of sicknesses; the leprosy, canker, quartan ague, palsy, consumption, black jaundice iliac passion, dropsy, catarrh, gout in the feet, and scrophulas; as also apoplexies, tooth-ach, all melancholic diseases, cold and dry, tremblings, vain fears, fancies, gout, dog-like appetite, hemorrhoids, broken bones, dislocations, deafness, pain in the bones, ruptures, (if he be in Leo or Scorpio, or in an evil aspect to Venus,) the chin-cough, pain in the bladder, all long diseases, melancholic madness, fear or grief; he governs the memory also, which is cold and dry; and the hearing also. Under it are, barley, red beets, beech-tree, bi-foil or tway-blade, bird's-foot, bistort or snakeweed, blue-bottles, buckthorn, plantain, wild-campions, pilewort, cleavers or goosegrafs, clowns woundwort, comfrey, cudweed or cottonweed, sciatica cresses, crosswort, darnel, dodder, epithymum, elm-tree, osmond royal, fleawort, flixweed, fumitory, stinking gladden, goutwort, wintergreen, hawkweed, hemlock, hemp, henbane, horsetail, knapweed, knotgrafs, medlar-tree, moss, mullein, nightshade, polypody, poplar-tree, quince-tree, rupture-wort, rushes, Solomon's seal, Saracen's confound, service-tree, ceterach or spleenwort, tamarisk, melancholy thistle, blackthorn, thoroughwax, tuttan or park (leaves and wood); as also aconite, chaste tree, parsley, stinking tree, aphodil, starwort, orach, shepherd's purse, capers, cummin, cypress, fern, black hellebore, great dock, mandrake, mulberry-tree, opium, herb truelove, pine-tree, favine, sage, fenna, and fengreen. 4. To Jupiter, which is a benevolent planet, moderately hot and moist, a friend to all the rest except Mars; answering to the liver, and cherishing the faculties thereof by its influence. Some affirm also, that he rules the lungs, ribs, sides, veins, blood, and digestive faculty; the natural virtue of man, as also the gristles and sperm with Venus; the arteries and the pulse. Of sickness: the peripneumony, apoplexy, pleurisy, cramp, the cardiac with the

Sun, quinsy, numbness of the sinews, and stinking of the mouth; all infirmities of the liver and veins, apytumes about the breast and ribs, all diseases proceeding from putrefaction of blood and wind, fevers, and other diseases; he governeth the blood, hot and moist; so the judgment. Under which are, agrimony, alexander, asparagus, avens, bay tree, white beets, water-betony, wood-betony, bilberries, borage, bugloss, chervil, sweet cicely, cinquefoil, alecost or costmary, dandelion, docks, bloodwort, dog's or quick grass, endive, hart's tongue, hyssop, fengreen or house-leek, liverwort, lungwort, sweet maudlin, oak-three, red roses, sage, sauce-alone or jack by the hedge, scurvy-grass, succory, and our lady's thistle; as also almonds, walnuts, barberries, calaminat, cherries, cornel-tree, hound's tongue, beans, beech-tree, strawberries, ash-tree, fumitory, liquorice, barley, white lily, flax, daniel, mace, apple-tree, mints, mulberries, myrobalans, nuts, basil, olive-tree, organy, raisins, pine-tree, peach-tree, roots of piony, poplar-tree, purslain, plumb-tree, self-heal, pear-tree, rhubarb, currants, madder, service-tree, spike, confound, wheat, violets, vine-tree, mastick, storax, sugar, and all other sweet things. 5. To Mars, which is a planet exceeding hot and dry, a friend to Venus, and an enemy to all the rest; cherishing the bladder and gall of the microcosm. Some say, he rules the left ear, apprehension, and causeth valour; as also the veins, genitals, testicles, and the reins with Venus. Of sicknesses; the pestilence, hot fevers, yellow jaundice, shingles, carbuncles, fistulas, choleric fluxes, fevers tertian and quotidian, all wounds, especially in the face; and the epilepsy with the Moon and Mercury: also megrims, burning, scalding, ringworms, blisters, phrensy, fury, hairbrains, sudden distempers of the heart, the bloody flux, fistulas, diseases in the genitals, stone in the reins and bladder, scars, pockholes, hurts by iron and fire, the calenture, St. Anthony's fire, and all diseases of choler and passion; he governs smelling also, which is hot and dry; so the attractive virtue. To which belong, arsenicart, assarabacca, barberry-bush, sweet basil, bramble-bush, briony, brooklime, butcher's broom, broom, broom-rape, crowfoot, wake-robin, crane's bill, cotton-thistle, toad-flax, furze-bush, garlic, hawthorn, hops, madder, masterwort, mustard, hedge-mustard, nettles, onions, pepperwort or dittander, carduus benedictus, radish, horse-radish, rhubarb, raphentic, bastard rhubarb, thistles, star-thistle, tobacco, woolly thistle, treacle-mustard, mithridate-mustard, dyer's weed, and wormwood; as also birthwort, camellion thistle, cora-el-tree, danewort, esula, euphorbium, spearwort, hellebore, spurge-laurel, medlars, monk's hood, plantane, leeks, plumb-tree, oak-tree, tormentil, nettle, scammony, and all poisonous things. 6. To Venus, which is a benevolent planet, nocturnal, feminine, moderately cold, a little more intensely moist, a friend to the Sun, Mars, Mercury, and the Moon; an enemy to Saturn, and
having

having an influence upon the genitals and urinary parts; as also upon the throat, women's breasts, and milk therein; the loins, the liver, and sperm with Jupiter, and the reins with Mars. Of sicknesses; all diseases of the matrix, gonorrhea, flux of urine, priapism, weakness of the stomach and liver, French pox, flux of the bowels, and the menstrual sickness with the Moon: and all diseases of the genitals, reins, and navel; and all diseases by immoderate lust, weakness in the act of generation, all sorts of ruptures, all diseases of the urine, and iliac passion, and governs the procreative virtue, and the feeling with Mercury, which is of all qualities. Under which are, alehoof or ground ivy, black alder-tree, apple-tree, stinking orach, archangel or dead nettles, beans, lady's-bedstraw, birch tree, bishop's-weed, blights, bugle, burdock, cherry-tree, winter cherries, chickweed, chich-pease, clary, cock's-head, colt's-foot, cowslips, daisies, devil's-bit, elder, dwarf-elder, eringo, featherfew, fig-wort, filapendula, fox-gloves, golden-rod, gromewel, groundsel, herb-robert, herb-truelove, kidney-wort, lady's-mantle, mallows, marshmallows, mercury, mints, mother-wort, mugwort, nep, parsnip, peach-tree, pear-tree, penny-royal, periwinkle, plantane, plumb-tree, primroses, ragwort, rocket, winter-rocket, damask-roses, wood sage, fanicle, self-heal, soap wort, sorrel, wood-sorrel, sow-thistles, spignel, strawberries, garden tansey, wild tansey or silverweed, teasels, vervain, vine-tree, violets, wheat, and yarrow; as also asphodil, maiden-hair, coriander, fow-bread, figs, ground ivy, flower-de-luce, all kinds of lilies, melilot, pomegranates, daffodil, stone-parsley, sweet-pears, roses, sanders, satyrion, wild thyme, thyme, vervain, violet, laudanum, musk, amber, and all kinds of perfumes. 7. To Mercury, which is a mutable planet, good with the good, and bad with the bad; hot with the hot; and cold with the cold; dry with the dry, and moist with the humid; a friend to Saturn, Jupiter, Venus, and the Moon; and an enemy to Mars and the Sun; representing the lungs, which it doth sympathetically strengthen by its influences; yet some appropriate it to the middle of the belly; some say also that he rules the brain, especially the imagination, hot and dry; the tongue, hands, feet, and irrational parts, and that alone he maketh apprehensive, desirous of knowledge, and very fickle; as also that he governeth the spirits, memory, and brain, with the Sun and Moon. Of sicknesses; madness, loss of the common senses, doting, lispings, and stammering, coughs, hoarseness, and the epilepsy with the Moon and Mars; almost all diseases of the brain, as vertigoes, &c. all diseases of the lungs, as asthmas, phthysics, &c. all imperfections of the tongue and memory, gout, stoppings of the head, dumbness, epidemical diseases, and hurts of the intellect. Under it are, calamints or mountain-mint, carrots, carraways, dill, elecampane, fern, fennel, hog's-fennel, germander, hazel-nut-tree, hoarhound, hound's-

tongue, lavender, liquorice, wall-rue, maiden-hair, golden-maiden-hair, sweet-marjoram, melilot, money-wort, mulberry-tree, oats, parſley, cow-parſnip, pellitory of the wall, chamepity or ground-pine, reſt-harrow or cammock, ſamphire, ſummer and winter ſavory, ſcabious, ſmallage, ſouthernwood, meadow trefoil, garden valerian, and honey-ſuckles or woodbine; as alſo marſmallows, aniſeed, columbine, daiſy, camomile, cubebs, beans, fumitory, walnut-tree, juniper-tree, mercury, navew, cinquefoil, ſtone-parſley, butterbur, burnet, peony, longwort, elder, ſpeedwell, wild thyme, and colt's-foot. All which are ſaid to cure diſeaſes by ſympathy, ſo each planet cures its own: or antipathy, ſo the contrary. And are under the planets primarily and directly, or immediately, or ſecondarily, by the reſpective amity of the reſt. Note, That the ſolar planets have a good ſhape, yellow flower, good ſmell and taſte, and in open meridional places. The lunar are thick leaved, juicy, wateriſh, ſweet taſted, ſoon grown up, in wateriſh places. The Saturnine, ill ſhaped, of ill ſmell, binding taſte, lean; in filthy, woody, ſolitary, dark, places. The jovial, of good taſte and ſmell, red or ſky-coloured, oily ſubſtance, plain leaved, in fat places. The martial, rough and prickly, reddiſh, of burning taſte, in dry places. The venereal, white flowered, of clammy juice, of ſweet taſte, pleaſant ſmell, ſmooth leaved, not laciniate. The mercurial, verticolar, flowered, coddled, arenary.

II. To the ſigns, as followeth, amongſt which there are four degrees, after the manner of the four firſt qualities; ſo they are appropriate, 1. To Aries, which is a maſculine fiery ſign, or hot and dry, ſympathetical to the head. Some ſay, it is eaſt, maſculine, choleric, governing the face, eyes, ears, &c. and whatever is above the firſt vertebra of the neck. Of ſickneſſes; the apoplexies, mania, ſpots and wounds in the face, abortifements, and other impetuous diſeaſes, ringworms, and morphews; alſo the ſmall pox and meaſles, polypus, and all diſeaſes in the head. Thus in the firſt degree, red mugwort, betony, ſuccory, larkſpur, dandelion, mints, peach-kernels, butterbur, wild thyme, colt's-foot, and ſuellin; and are to be gathered in the end of the dog-days, after the full of the Moon. In the ſecond degree, ſperage, St. John's-wort, milfoil, plantane, and peony; and are to be gathered the Sun and Moon being in Cancer. In the third degree, agatic, garden ſpurge, mezerion-tree, wild gourds, ſpurge, colt's-foot, gentian, privet, nutmeg, palma Chriſti, elder, and ſarſaparilla; and are to be gathered betwixt St. James's and St. Lawrence's day. In the fourth degree, ſouthernwood, calamint, capers, cinnamon, white hellebore, marjoram, hoarhound, wild creſſes, roſemary, turbiſh, and ſpike; and are to be gathered partly in April, partly in September

tember. 2. To Taurus, which is a terrestrial feminine sign, cold and dry, sympathetic to the neck and throat. It is south, feminine and melancholic, governing the voice, seven vertebræ of the neck and channel bone. Of sicknesses; quinseys, scrophulas, catarrhs, and hoarseness; and all diseases incident to the throat. Thus in the first degree, betony, miltwaste, ground ivy, the root of white lilies, mints, daffodil, polypody, roses, rosemary, valerian, and violets, and mollify the tumors of the jaws and spleen. In the second degree, maiden hair, winter cherries, columbines, ivy, Solomon's seal, oak tree, and mistletoe of the oak; and help wounds. In the third degree, bugloss, our lady's thistle, hound's tongue, agrimony, the lesser dock, organy, stone parsley, oak tree, cinquefoil, fanicle, figwort, tormentil, perwinkle, and silver weed; and are traumatic. In the fourth degree, mouseear, great burdock, wild betony, great celandine, ash-tree, mallows, lungwort, scabious, and ground ivy; and have antipathy with the sublunaries which are under Libra and Scorpio, but sympathetic with those that are under Cancer and Sagittarius. 3. To Gemini, which is masculine sign, airy, but hot and moist, possessing the shoulders: it is west, masculine, sanguine, governing the arms and hands, with the parts belonging thereto. Of sicknesses; phlegmons, fellons, and others of blood there; and all such diseases as are incident to the hands, arms, and shoulders, really or by accident. Thus, in the first degree, anniseed, marshmallows, bugloss, borragge, fennel, hyssop, stone-parsley, self-heal, and wall-rue. In the second degree, great burdock, bugloss, fern, white lime tree, turnips, &c. In the third degree, chickweed, wake robin, mace, and deal nettle. In the fourth degree, sorrel, germander, camomile, celandine, mugwort, and rhubarb; and they have an antipathy with the sublunaries of Capricorn, and sympathy with those of Libra, and Aquaries. 4. To Cancer, which is a feminine sign, watery, cold, and moist, sympathetic to the breast and lungs, as also to the ribs and spleen, and cureth the diseases thereof. It is north, feminine and phlegmatic, governing the liver also. Of sicknesses; the alopecia, watery eyes, rheums, scabs, and the leprosy; as also all imperfections of the breast, stomach, and liver, and incident thereto. Thus, in the first degree, chickweed, cabbage, thistle, the flowers and fruit of beans, lady's bedstraw, turnips, rampions, sage, and figwort. In the second degree, strawberry-tree, cones of the fir-tree and pine, comfrey, nightshade, turpentine, and mistletoe. In the third, brooklime, foxgloves, cudweed, rushes, cresses, seed of stone-parsley, purslain, willow-saxifrage, and stone-crop. In the fourth degree, water-lily, piony, houseleek, and coral; and are antipathetic to the sublunaries of Sagittarius, and sympathetic to those of Taurus and Libra.

5. To Leo, which is a masculine sign, fiery, or hot and dry, governing the heart

and stomach. It is of the east, masculine, choleric, ruling the back, sides, and midriff, with Virgo, and the twelve vertebræ of the breast, pericard, and appetite. Of sicknesses; the cardiac passion, the trembling of the heart, and swooning; all diseases thereof, and back, and all diseases of choler and aduſtion. Thus, in the first degree, basil, saffron, cypress tree, carnations, hyssop, lavender, water plantane, sundew, sea bindweed, and thyme. In the second degree, wild angelica, tway-blade, centaury, galingale, gentian, and devil's bit. In the third degree, stinking May-weed, carrot, mints, garden cresses, penny-royal, crowfoot, and nettles. In the fourth degree, birch-tree, box, broom, and bay-tree; the first are to be gathered the Sun being in Pisces, the Moon in Cancer. The second sort in the beginning of May before sun-rising, or in the end of August; or the Sun being in Taurus, and the Moon in Gemini. The third, the Sun being in Leo, and the Moon in Virgo; and the last quadrature, or for refrigeration, the Sun being in Taurus, and the Moon in Gemini. The fourth, the Sun being in Pisces, and the Moon in Aquaries, or both. 6. To Virgo, which is a feminine sign, earthy, cold, dry, and sympathetic to the liver, intestines, and belly. It is south, feminine, melancholic; governing the midriff with Leo, the navel, spleen, omentum, and all that belongeth to them. Of sicknesses; the cholic and iliac passion, oppilations of the spleen, and black jaundice; also all diseases incident to the bowels, meſeraic veins, omentum, diaphragm, and spleen. Thus, in the first degree, sorrel, wood-sorrel, burdock, succory, plantane, pear-tree, and wild sage. In the second degree, white beets, medlars, Solomon's seal, and briar-bush. In the third, birthwort, bugle, fleabane, self-heal, and oak-tree. In the fourth, carduus benedictus, small centaury, black alder-tree, adder's tongue, ſloe-tree with all its parts, fruit and flowers, tormentil, and bistort. 7. To Libra, which is a masculine sign, airy, hot, and moist, sympathetic to the reins and bladder. It is west, masculine, sanguine; governing the navel and buttock with Scorpio. Of sicknesses; all filthy scabs and spots in the face, loss of sight, cankers, hemorrhoids, the leprosy, alopecia, and cholic; all diseases of the reins, wind, and blood corrupted. Thus, in the first degree, all sorts of daisies, bugle, feverfew, cowslips, goat's beard, and water parsnip. In the second degree, marshmallows, camomile, mistletoe, martagon, mallows, line-tree, vervain, and silver-weed. In the third degree, calve's snout, mugwort, nut-tree, and wall rue. In the fourth degree, chickweed, great celandine, black mints, scabious, figwort, and house-leek. 8. To Scorpio, which is a feminine sign, watery, cold, and moist, and sympathetic to the genitors. It is north, feminine, and phlegmatic, governing the fundament and bladder with Libra. Of sicknesses; the former and French pox, and all diseases that infect the privities of

both sexes, and bladder. Thus, in the first degree, croffwort, hawthorn, and service-tree; as also all simples of the first degree of Cancer gathered in October. In the second degree, ash-tree, all sorts of apples, and plumb-tree. In the third, barberry-tree, box, feverfew, and soapwort; hereto belong all herbs of the second degree of Cancer. In the fourth, great red beets, mercury, daffodil, and ribes. 9. To Sagittarius, which is a masculine sign, hot and dry, sympathetic to the loins, &c. It is east, masculine, choleric, governing the thighs and hips. Of sicknesses; hot fevers, blear eyes, and falls, and all diseases in the thighs and hips. Thus, in the first degree, comfrey, onion, radish, figwort, flowers of line-tree, sesamum, and vervain. In the second degree, garlic, wild angelica, henbane, lovage, and leaves of willow-tree. In the third degree, red beet, assarabacca, celandine, saffron, fern, ground ivy, madder, devil's bit, and turmeric. In the fourth degree, gum thistle, cresses, and white vine. 10. To Capricorn, which is a feminine sign, terrestrial or earthy, cold and dry, sympathetic to the knees and nerves. It is south, feminine, melancholic, governing the hams, and what belongeth to them. Of sicknesses, aches in the knees, deafness, loss of sight and speech, itch and scabs, and foulness of the skin; all diseases in the knees and hams, and all diseases of melancholy, and scirrhuses. Thus, in the first degree, marigold, black cherries, elecampane, mulberry-tree, bramble-bush, and worts. In the second degree, blackberries, mullein, and garden-endive. In the third degree, acorus, wake-robin, shepherd's purse, comfrey, gourds, galingale, garden-mallow, and all kinds of fow-thistles. In the fourth degree, hellebore, henbane, mandrake, monk's hood, herb truelove, favin, nightshade, and staves-acre. 11. To Aquaries, which is a masculine sign, aerious, hot, and moist, sympathetic to the legs. It is west, masculine, sanguine, governing what belongs to the nerves. Of sicknesses, quartan fevers, the black jaundice, swellings of the legs, and varices; also all diseases incident to the legs and ankles, all melancholy coagulated in the blood. Thus, in the first degree, angelica, wild carrot, fig-tree, flowers of the ash-tree, ground ivy, walnut-tree, melilot, fanicle, Solomon's seal, and periwinkle. In the second degree, larkspur, cummin, dodder of thyme, crane's bill, clotbur, rose-root, wall-rue, wild sage, and white nettle. In the third degree, agrimony, mouseear, clary, mercury, saxifrage, and dragon. In the fourth degree, the leaves of assarabacca, motherwort, hemlock, and medlars. 12. To Pisces, which are a feminine sign, aqueous, cold and moist, and sympathetic to the feet. It is north, feminine, phlegmatic, governing all that belongs to the feet. Of sicknesses; gout, scabs, the leprosy and palsy, lameness, kibes, diseases incident to the feet; all diseases of salt phlegm, mixed with humours; the small pox, measles, and all cold and moist diseases. Thus, in the first degree, long birthwort, cabbage,

bage, gourds, elecampane, myrobalans, navew, water lily, purslain, and turnips. In the second degree, artichokes, calves snout, blue-bottle, and golden flower gentle. In the third degree, nigella, garden and wild poppy, and sow-thistle. In the fourth degree, hemlock, henbane, monk's hood, horned poppy, and white nightshade.

Here let it be remembered, that in all these the sympathy and antipathy of the signs and planets are to be observed; both essential, by house and exaltation, temperature, or quality, or conditions; or else accidental, by configurations; of which some are obnoxious and hateful, as a quartile and opposition; as also the conjunction of bad planets: others are healthful, as a sextile and trine, and the conjunction of good planets. Next consider what diseases every planet causeth distinctly of himself, and what under the signs of the zodiac; what parts the planets generally rule, and what of the signs they are under, and houses of the heaven in a celestial scheme; and what part each planet particularly rules, according to his transit through each sign. Then may the nature and kind of the disease be found out by the figure of the decumbiture. 1. By the houses of heaven; of which, the sixth, seventh, and twelfth, signify diseases. 2. By the nature of the signs; as fiery, earthy, airy, and watery. 3. By the planets, and their aspects. The part may be found out by considering the government of the sign; and masculine planets signify the right side, and the feminine the left, and afflict where ruling. As for the length of the disease, it may be found out by the nature of the planets, as followeth; Saturn causeth long sicknesses; the Sun and Jupiter, short; Mars, shorter, but acute; Venus, mean; Mercury, inconstant, as aspected; the Moon gives such as often return. Whether it shall end by life or death, well or ill, may be conjectured from aspects. The Sun giveth vital heat to the creation, the Moon giveth radical moisture, Saturn fixeth and putrifieth this, Jupiter turneth it into nourishment, Mars calcines it, Venus makes it fruitful, and Mercury makes it rational. As for elements, the fire preserves the earth, that it be not drowned or destroyed by a continual flux of water upon it; the air preserves the fire, that it be not extinguished; the water preserves the earth, that it be not burned; and the earth is the decticon of all. The air and fire are thin and active; water and earth, thick and passive, with a proportionable difference; or, as others say, air hath motion, thinness, and darkness; fire hath the two first, and brightness; water hath motion, darkness, and thickness, the earth hath the two last, and quietness. Also the Sun is chief in chronic diseases; and the Moon in the acute with the ascendant. The occult qualities are found out by peiralogy, or experience, which is more sure and safe.

II. Next follow those things which are more remote, that concern planets and other medicinals, as commonly to be compounded therewith. As, 1. The topography, or place of gathering them; thus, 1. Herbs are to be gathered in mountains, hills, and plain places; in those that are highest especially, and exposed to the sun and winds; except some few, as germander and ground pine, which are more odoriferous and frequent on hills: but those that grow only in plain places are to be gathered in more dry places, and more remote from lakes and rivers, except they delight in more moisture, as water-caltrops, water-lilies, &c. 2. Flowers are to be gathered in the same places, in which there are the best plants. 3. So fruits. 4. And seeds. 5. So roots also. 6. Woods are to be taken from trees where they are well grown. 7. Barks, where their plants are best. 8. Juices are to be taken from the best herbs, chiefly the well grown and greater, as being less excrementitious, and that before they grow woody and rotten. 9. Liquors and gums, &c. are to be taken from mature stalks, which are the best in their kind, as the rest. 2. The chronology or time. Thus, 1. Herbs are to be gathered in the time of their flourishing, and beginning to go to seed; which is for the most part in July, if they are to be kept, and that at noon in a clear day, being some considerable time or certain days before; freed from showers and not too dewy, or scorched by too much heat of the sun, which is chiefly in the spring or beginning of summer. But those which grow green all the year in gardens may be gathered at any time; and those that have neither stalk, flower, nor seed, as maiden-hair, spleenwort, &c. are to be gathered in the vigour of their leaves, i. e. when they are most green and greatest; yet some, because while they flower or bear seed they are woody and dry, are to be gathered before that time, as succory, beet, &c. 2. Flowers, in the vigour of their maturity, when opened (except the rose) at noon in fair weather, after the sun hath taken off the dew, and before they wither or fall off, which for the most part is in spring. 3. Fruits, when they are ripe, and before they wither. 4. Seeds, out of fruits thorough ripe, when they begin to be dry, and before they fall off; and out of plants when dry and are no longer green, as in the summer, i. e. June or July. 5. The juice of plants is to be pressed out whilst they are green, and their leaves yet tender, and especially out of the well grown and greater. 6. The barks of fruits are to be taken when the fruits are full ripe, and those of roots when the herbs have lost their leaves, but those of trees when they are in their vigour. 7. Woods, when the trees are full grown. 8. Liquors and gums, &c. are taken by opening the stalk in the vigour thereof, and gums when congealed and mature. 9. Roots, when the fruit is fallen off, and the leaves also begin, which for the most part is in autumn, and are to be digged up in fair weather; which is necessary al-

ways to be observed: as also (according to some) the decreasing of the moon, the day of decreasing, and the morning, that time being balsamical: as also the fortitude of the planet, familiar to the thing to be gathered, and the sign of the zodiac. 3. The dropology, or manner of gathering them; as some affirm, some plants having diverse faculties, according to the diverse manner of gathering them, as upwards or downwards; so hellebore, the leaves drawing the humours upwards or downwards accordingly: so the root of elder also, and the buds, which, being gathered upwards, cause vomiting, and purge if downwards: also some observe, the scite of the regent planets, as whether they are oriental or occidental, &c. 4. The parasceurology, or manner of preparing them for asservation. Thus, 1. Flowers, are kept for the most part separated from the stalks and leaves. 2. Herbs or leaves, if they are greater, and having more thick stalks, they are kept apart from them; but, if more slender, they are kept together, and sometimes with the flowers. 3. Fruits, as apples, &c. are to be placed with their stalks downwards, and last longer if laid on a heap of barley. 4. Roots, some are kept whole, as those of birthwort, gentian, hermodactils, satyrion, &c. others are dissected, as those of briony, elecampane, flower-de-luce, &c. also some have the woody matter taken away, as those of fennel, stone-parsley, &c. 5. The phylacology, or way and place of keeping them; which in general ought to be pure, convenient, high, dry, open, of a north or south situation, where they may not be burnt by the sun, or moistened by the walls, &c. more particularly: as 1. Flowers, are to be dried in the shade, and then they (especially those of good odour) are to be kept in teile caskets. 2. Herbs, are to be dried in the shade, except those that have thicker stalks, and moister leaves, and so subject to putrefaction, which must therefore be dried by the more intense heat of the sun, or some other way; and when they are well dried, they are to be kept in linen bags, or, which is better, in wooden caskets, that they may be defended from dust. 3. Seeds, are to be kept in a dry place, and in a wooden or glazed vessel, being wrapped up in papers, that they may last the longer, and without impurity. 4. Fruits, in boxes, panniers, or scuttles. 5. Gums and dry rosins, in a dry place, and in wooden vessels, but the more liquid in pitchers. 6. Barks, in wooden coffers, and a dry place. 7. Roots, in a dry air, and the smaller and more thin (whose virtues may be easily dissipated by the heat of fire or the sun) are to be dried in the shadow and wind, as those of parsley, fennel, &c. but the more gross by the sun or wind, as those of briony, gentian, mandrake, and rhubarb. 6. The monology, or duration of them. Where note, the time of keeping them must not exceed that of their duration, which is diverse, according to the greater or smaller solidity of the substance, by which they are more or less subject to

diffipation. In particular; 1. Vegetables: as, 1. Flowers may be kept so long as they retain their colour, smell, and taste, which for the most part is half a year; therefore they are to be changed every year. Note also, they are best when freshest. 2. Herbs may be kept longer, yet it is better to change them yearly. 3. Seeds, by how much they are more hot, sharp, and aromatical, by so much also are they more durable, therefore may be kept two or three years; but those that are smaller and colder must be changed every year, and must be kept carefully, lest they grow mouldy. 4. Fruits must be changed every year; but the exotic, that have a harder bark or shell, &c. may be kept two or three years. 5. Gums and resins are more durable. 6. Barks last a year or more. 7. Roots, if they are little, slender, and thin, are changed every year; as those of asparagus, sperage, &c. but the greater, and having a gross substance, last two or three years; as those of birthwort, briony, gentian, rhubarb, and hellebore, &c.

Thus far we have considered the faculties of medicinals; now follow those of aliments, which are such vegetables, &c. as nourish and increase the bodily substance, by restoring that which is depredated, the body being in a perpetual decay, and therefore wanting refection by meat and drink: and this, if it do not greatly affect the body by any other quality, is properly and simply called aliment, and is in some measure like unto the substance of the body, into which it is to be converted, but, if it change the body by any exuperant quality, it is not simply aliment, but medicamentous: such are those things which with sweetness have adjoined an acid, acerb, bitter, or sharp, quality; and from hence ariseth the difference of aliments; which, 1. in respect of substance are hard and soft; heavy, viscid, or light; firm or infirm; easily or hardly concocted or corrupted. 2. In respect of quality, they are hot, cold, moist, or dry; sweet or bitter; sour, salt, sharp, acid, acerb, or austere; of good or bad juice; simple or medicamentous; wholesome or unwholesome; best or worst; of which some are, 1. Euclymic, or of good juice, sweet in taste, pleasant to the palate, and not of any unpleasant smell; as also fat things, and some of which are insipid, as bread of the best wheat, &c. 2. Cacochymic, or of evil juice, which besides sweetness, have some other quality mixed therewith, as sharpness, bitterness, saltiness, acerbity, and too much acidity; also all fetid things, of an unpleasant smell, and corrupted; as the oleaceous, (especially the wild,) except lettuce and succory, also cucumbers, corrupt corn, things growing in close and dirty places, as also thick, austere, and acid; beer made of bad grain, &c. and some of these ingender, 1. a cold, pituitous, and crude, juice, as the hasty fruits and cold herbs. 2. But others, a hot and bilious, as all things that have acrimony, so gar-
lic,

lic, onions, leeks, wake-robin, cressies, mustard, &c. 3. And some a melancholic, as pulses, especially lentils, and cabbage. 3. Of gross nourishment, as those things which have a strong and hard substance, as bread baked under ashes, and whatsoever is made of meal without leaven; chefnuts, acorns, frogstools, thick, sweet, and black, wine and ale; also whatsoever is viscid and glutinous, and are to be shunned by all that live at ease, and use no exercise before meat; but those are the best for diet that are in a mean between incrassating and attenuating. 4. Of thin juice, as things which are not tough or viscid, and have not a strong substance, but thin and friable, especially if joined with acrimony; as garlic, onions, leeks, hyssop, organy, savory, bread of wheat well fermented, and twice baked, bitter almonds, peaches, and thin white wines; these also open the passages, clean away what is viscid, incide and extenuate what is gross; but are to be shunned by those who are of a choleric temperature; the long use of them causing bilious and serous excrements, yet are agreeable to those whose body and veins are full of a crude, pituitous, and melancholic juice. Here note, an attenuating diet differeth from a slender one, the last prefixing a mode in the quantity, and the other being so called by reason of the tenuity of the alimentary juice. 5. Eupeptic, or of easy concoction, as things which have not a solid or firm substance, but either rare or easily resolvable, concocted, or corrupted, as most fruits and things oleraceous; but these, as they are quickly and easily concocted, so also are they easily altered and corrupted: for, if taken into a stomach whose heat is sharp, biting, and febriculous, or into which some bilious humour doth flow, they are not turned into aliment, but some evil humour but those things that are not easily concocted are also neither altered nor corrupted. 6. Dispeptic, or of hard concoction, as all things of a solid substance and thick juice; as unleavened bread, cabbage, dates, chefnuts, unripe services, acorns, and acid wines. These, if taken into a hot stomach, are sooner concocted than if into a mean: and, in a weak and cold one, they are either concocted not at all, or very slowly.

An experiment of all these may be made by decoction in water. For the liquor, if sweet, sheweth the thing to be of good juice; if thick, of gross juice, if thin, of little; if well boiled, of much nourishment; if slowly boiled, not easily altered in the stomach, and so the contrary. Also some are, 1. Flatulent, of cold unconcocted humidity; as all fruits early ripe, especially if eaten raw, ciches, and lupines; also whatsoever is sweet with austerity, which, by reason they cannot be easily distributed, and remain long in the stomach, cause flatulency, as must, new beer, &c. 2. Without wind, of easy elixation, as things well boiled, leavened bread

bread made of good wheat and well baked, and old wine. 3. Easily descending, acid, salt, insipid, or excrementitious; as things full of humidity, participating of a certain acrimony or saltiness without acerbity; or are insipid, as mallows, orach, mercury, marigolds, &c. and things full of excrements, as brown bread, and whatsoever is full of bran, and broths. 4. Slowly, as things dry and binding, having little humidity; as dry meats, fine bread, things having a little astringency; as pears, services, black wines, or red, but sooner the austere. Thus of the definition of phy-tology and its parts. 1. Therapeutic, or curatory. 2. Threptic, or alimentary; in both which vegetables are considered; 1. according to their substance, as of thick or thin substance or consistence, loose or close, glutinous or crumbling, heavy or light. 2. According to their accidents; and 1. as medicamentary, 1. according to their more immediate accidents. 1. The qualities; as the first, heat, coldness, moisture, and dryness, with their degrees, sensible, manifest, vehement, or most violent. The second, mollifying, hardening, rarefying, condensing, opening, binding, drawing, repelling, cleansing, purging, attenuating, clamping, obstructing, easing pain, stupifying, reddening, putrifying, and burning. The third, suppurating, incarning, conglutinating, cicatrizing, generating callus, provoking urine, breaking the stone, provoking the terms, expectorating, and generating milk and sperm, causing sweat, sneezing, beauty, killing worms, and phlegmatizing. The fourth, occult, resisting poison, specific, and purging. 2. The way of finding out these qualities: 1. The manifest; 1. by reason, as by the smell, colour; as white, black, green, and yellow, &c. Tastes; as bitter, sharp, acid, nitrous, salt, sweet, acerb, austere, oleous, ac-quin-sipid or watery, earthy, woody, and corn-like. Touch; as thick, thin, close, hollow, hard, soft, heavy, light, clammy, dry, rough, smooth; mutability, age, places, and operation of the four first qualities. 2. By experience, considering *quid, in quo, quomodo*. 2. The occult. 1. By signature. 1. External, in colour, form, property. 2. Internal, as appropriated, 1. To the planets, as to the Sun, Moon, Saturn, Jupiter, Mars, Venus, Mercury. 2. To the signs, as to Aries, Taurus, Gemini, Cancer, Leo, Virgo, Libra, Scorpio, Sagittarius, Capricorn, Aquaries, and Pisces. 2. By experience, according to the more remote accidents, as the place of gathering them, the time and manner, the way of preparing them for keeping, and place thereof; their duration, discrimination, place in receipts, with their compositions and way of making them; their doses, as ingredients and compounded; their use, and season and manner of using them, &c. II. As alimentary, and so as of good or bad juice, of thick or thin juice, of easy or hard concoction, windy or without wind, easily or slowly descending, &c.

Now follow the differences of vegetables, and, in general. I. External. 1. Of Trees, which are, 1. rhodoflory, or rose-flowered, as the rose, holy-rose, and cistus-ledon, &c. 2. Pomiferous, or apple-bearing; as the apple-tree, quince-tree, citron-tree, orange-tree, pomegranate-tree, pear-tree, fig-tree, fycamore-tree, mulberry-tree, strawberry-tree, medlar-tree, service-tree, peach-tree, apricot-tree, plumb-tree, myrobalans-tree, sebesten-tree, jujube-tree, cornel-tree- nettle-tree, cherry-tree, pockwood-tree, and eben-tree. 3. Nuciferous, or nut-bearing, as the almond-tree, walnut-tree, filbert-tree, nut-tree, chefnut-tree, philstic-tree, oily acorn-tree, storax-tree, and exotic nut-trees. 4. Dactyliferous, as the palm-tree, bearing-dates. 5. Glandiferous, or mast-bearing; as the beech-tree, oak-tree, cork-oak-tree, Arabian bindweed and oak-tree, misletoe, gall-tree, and uva-quercina. 6. Bacciferous, or berry-bearing; as the saunders-tree, mastic-tree, frankincense-tree, turpentine-tree, balsam-tree, shumach-tree, scarlet oak-tree, ash-tree, holly-tree, line-tree, wayfaring-tree, ostrya, cotton-tree, maple-tree, plain-tree, ague-tree, great spurget-tree, barberry-tree, gooseberry-tree, elder-tree, laurel, bay-tree, mezerion-tree, mountain widow-wail, rock-rose, myrtle-tree, butcher's-broom, cloudberry-tree, box-tree, olive-tree, chaste-tree, privet, mock-privet, buckthorn, boxthorn, bramble, caper-tree, favin, cedar-tree, cypress-tree, juniper-tree, yew-tree, dragon-tree, sperage. 7. Aromaticiferous, or spice-bearing; as the nutmeg and mace-tree, puddingpipe-tree, cinnamon-tree, Indian-leaf, clove-tree, pepper-tree, cubeb-tree, cloveberry-tree, cardamom-tree, and aloe-tree. 8. Coniferous, or cone-bearing, like pine-apples; as the caniferous cedar, pine-tree, larch-tree, pitch-tree, and fir-tree. 9. Juliferous, or wool-bearing, as the willow-tree, alder-tree, elm-tree, and poplar-tree. 10. Siliquate, or coddled; as the shrub-trefoil, bean-trefoil, Egyptian thorn, rosewood-tree, broom, furze, bastard fena, fena, spindle-tree, and rosebay. 11. Scopary, as the tamarisk-tree, and heath, &c. 12. Succiferous, or juice-yielding; as the ammoniac-tree, metopion, acacia, manna-tree, or ash, gamandra-tree, or Indian great spurge-tree. 13. Gummi-ferous, or gum-bearing; as the gum-arabic-tree, or Egyptian thorn, forcocol-tree, ivy-tree, caucomum-tree, lacca-tree, dragon-tree, camphire-tree, juniper tree, cherry-tree, plumb-tree, goat's-thorn, yielding-tragacantha, elm-tree, &c. 14. Refiniferous, or rosin-yielding; as the turpentine-tree, larch-tree, mastic-tree, frankincense-tree, myrrh-tree, storax-tree, liquid-amber-tree, or ocofoti, bdellium-tree, Benjamin-tree, tacamahaca-tree, gum-clemi-tree, colophony-tree or fir-tree, and pitch-tree.

2. Of Herbs, which differ in respect of, I. the roots, and so they are, 1. Bulbous, or round-rooted; as the bulbous flower-de-luce, wall-flowers, saffron, meadow saffron, onions, leeks, squills, garlic, moly, dog-stones, and satyrion, &c. 2. Not bulbous,

as most other plants. II. The leaves, and so they are, 1. Longicautilious, or long stalk-leaved : as grafs, rushes, nard, galingale, horfetail, reed, paper-reed, stinking gladden, flower-de-luce, aromatical reed, ginger, zedoary, and coftus, &c. 2. Crassifolious, or thick-leaved ; as houfeleek, Venus's navelwort, aloes, roseroot, orpine, purflain, fampshire, and glafwort. 3. Hirtifolious, or rough-leaved ; as borage, gromel, hound's tongue, and mullein. 4. Nervifolious, or nerve-leaved ; as gentian, plantain, fleawort, bistort, pondweed, water-lilies, wake-robin, and hellebore, &c. 5. Rotundifolious, or round-leaved ; as birthwort, colt's-foot, butterbur, bur, and afarum. 6. Mollifolious, or soft-leaved ; as marfhmallows, mercury, and rhubarb, &c. 7. Trifolious, and pentaphils, &c. 8. Capillary, or hair-like ; as hart's tongue, moonfern, spleenwort, moonwort, maiden-hair, fundew, fern, and polypody, &c. 9. Spinose, or prickly ; as thistles, teasels, sea-holly, gum-thistle, and goat's-thorn, &c. III. The flowers ; and so they are, 1. verticillate and galeate, or turned and helmet-like ; as mints, calamint, organy, penny-royal, hyffop, thyme, Arabian fticadove, lavender, fpike, ground-pine, oak of Jerufalem, fage, nettles, betony, eyebright, figwort, felf-heal, hedge-hyffop, and dittany, &c. 2. Stellate, or ftar-like ; as madder, lady's bedftrow, croffwort, and rue. 3. Calcariflorous, or spur-flowered ; as columbine, larkspur, toad-flax, &c. 4. Umbelliferous, or boffed ; as cummin, fennel, dill, pellitory of Spain, fennel-giant, fcorching fennel, turbith, fow-fennel, bee's neft, chervil, parfley, angelica, mafterwort, laferwort, allheal, carraways, coriander, annifeed, burnet, cicely, hemlock, and dropwort. 5. Corimboide, ring or hook-like ; as elecampane, pellitory of Spain, mugwort, sneefwort, and wormwood. 6. Capitata, or headed ; as fcabious, knapweed, blue bottle, viper's grafs, marigold, devil's bit, and thistles, &c. IV. The fruits ; and so they are, 1. Pomiferous, or apple-bearing ; as mandrakes, cucumbers, melons, pompons, citruls, gourds, and wild cucumbers, &c. 2. Capsuliferous, or coffer-bearing ; as garden-creffes, fhepherd's pouch, fcurvey-grafs, and horfe-radish, &c. 3. Vafculiferous, or vefsel-bearing ; as centaury the lefs, moufeear, flax, St. John's wort, pimperl, moneywort, rupturewort, and poppy, &c. Siliquate, or coddled ; as the leguminose, and oleraceous, honeyfuckle, bird's foot, milkwort, cock's head, goat's rue, liquorice, fumitory, celandine, columbine, and nigella. V. The place ; and so they are, garden, wild, field, mountain, meadow, or aquatic ; as mofs, duck's meat, tree-lungwort, sea-nettle, wrack, arsefmart, pimperl, &c. VI. The manner of growing ; and so they are, convolvulous, or climbing ; as the pomiferous and leguminous, scammony, sea-bindweed, farfaparilla, china, briony, mechoacan, hops, vine, lily of the vale, ivy, Indian creffes, birthwort, fowbread, Parnaffus grafs, and faxifrage, &c. VII. Succiferous, or juice-yielding ; as the lactiferous, viz. fpurge,

and chamefyce, &c. Galbaniferous and fagapeniferous; fennel-giant, apopanax-plant or Hercules's allheal, black poppy yielding opium, aloes, scammony, wild cucumber yielding elaterium, euphorbium or gum-thistle, liquorice, sugar-reed. VIII. As gummiferous, or gum-bearing; as laferwort bearing asafœtida.

II. Internal, in respect of their use and virtues, or as alimentary and medicinal.

1. Of their use, or as dietetical; and so they are, 1. Frumentary, serving as bread-corn; wheat, rye, spelt-corn, barley, oats, rice, Turkey corn, millet, panic, burnt corn, and phalaris. 2. Leguminary, serving as pulse; as beans, pease, lentils, chiches, chichling, vetches, bitter vetches, lupines, kidney-beans, winged wild pease; and fenugreek. 3. Oleraceous, serving as pot-herbs, sallads, &c. and are, 1. roots, as onions, garlic, leeks, radish, wild radish, turnips, navew, parsnips, carrots, red beets; 2. leaves, as of lettuce, fuccory, cabbages, spinage, orach, beets, asparagus, cresses, mustard-seed, blights, hops, and stone-parley; 3. fruits, as artichokes, gourds, cucumbers, melons, strawberries, capers; and those of trees, as apples, quinces, oranges, lemons, pears, medlars, figs, peaches, apricots, plumbs, cherries, mulberries, grapes, olives, almonds, chestnuts, walnuts, filberts, and fungi. 4. Condimentary, serving as sauce; as pepper, ginger, cloves, cinnamon, cardamoms, nutmegs, mace, saffron, elder, capers, cresses, onions, garlic, &c. Sugar, oil, and vinegar, &c. The qualities of which, see in my *Isagoge Zoologice-mineralogica*, they being there mentioned for sauces. 2. Of their virtues, or as pharmaceutical, in respect of their several parts and qualities, first, second, third, and fourth.

I. Roots; are, 1. temperate, as bear's breech, eringo, garden-parsnips, jalap, mallows, mechoacan, asparagus, cinquefoil, lady's thistle, and tormentil. 2. Hot, and so, in the first degree, as basil, burdocks, borrag, bugloss, avens, aromatical reed, china, dog's grass, liquorice, knee-holly, mallows, marshmallows, pilewort, piony, poppy, sparling, parley, wild parsnips, self-heal, fatyrion, skirrets, scorzonera, valerian great and small, and white lilies. In the second, as asphodil male, carline thistle, cypress long and round, butterbur, devil's bit, hog's fennel, lovage, fennel, mercury, reeds, swallow-wort, spignel, farsaparilla, squills, waterflag, and zedoary. In the third, as angelica, avon, assarabacca, elecampane, birthwort long and round, briony white and black, celandine, doricum, filapendula, ginger, stinking gladden, galingale greater and less, hellebore white and black, masterwort, orris English and Florentine, rest-harrow, fowbread, snakeroot (Virginian), turbith, turmeric, and white dittany. In the fourth, as garlic, leeks, onions, and pellitory of Spain. 3. Cold, and so, in the first degree, as beets white and red, com-

frey

frey great, madder, plantahe, rose-root, and forrel. In the second, as alcanet, daïfies endive, hyacinth, hound's tongue, and succory. In the third, as bistort and mandrakes. In the fourth, as henbane. 4. Dry, and so, in the first degree, as aromatic reed, bear's breech, burdock, red beets, endive, eringo, hyacinth, knee-holly, madder, pilewort, and self-heal. In the second, as alkanet, male asphodil, avens, basil, butterbur, cypres long and round, devil's bit, fennel, hound's tongue, lady's thistle, lovage, marshmallows, mercury, reeds, parsley, plantane, smallage, forrel, swallow-wort, spatling poppy, succory, spignel, thistles, valerian, waterflag, and zedoary. In the third, as angelica, aron, assarabacca, elecampane, birthwort long and round, bistort, white and black briony, carline thistle, china, cinquefoil, white dittany, doricum, filapendula, greater and less galingale, stinking gladden, ginger, white and black hellebore, hog's fennel, masterwort, orris English and Florentine, peony male and female, restharrow, fowbread, celandine, farsaparilla, and Virginian snakeroot. In the fourth, as costus, garlic, onions, leeks, and pellitory of Spain. 5. Moist, such are basil, white beets, borrag, bugloss, dog's grass, daïfies, liquorice, mallows, parsnips, spatling poppy, satyrion, scorzonera, skirrets, valerian. 2. As for the second qualities, they are, 1. mollifying, as mallows, white lilies, and marshmallows. 2. Opening, as assarabacca, bruscus, carline thistle, endive, filapendula, fennel, garlic, gentian, leeks, onions, parsley, raphantic, succory, asparagus, smallage, turmeric. 3. Binding, as alkanet, bistort, bear's breech, cypres, cinquefoil, tormentil, toothwort, and waterflag. 4. Cleansing, as aron, asphodil, birthwort, grass, asparagus, and celandine. 5. Extenuating, as capers, and orris English and Florentine. 6. Anodyne, as eringo, orris, restharrow, and waterflag. 7. Helping burnings, as asphodil, hyacinths, white lilies. 8. Burning, as garlic, onions, and pellitory of Spain. 9. Discussing, as asphodil, birthwort, briony, and capers. 10. Expelling wind, as costus, galingale, fennel, hog's fennel, parsley, smallage, spikenard Indian and Celtic, waterflag, and zedoary. 3. As for the third qualities, they are, 1. Suppurating, as briony, marshmallows, and white lilies. 2. Glutinating, as birthwort, comfrey, daïfies, gentian, and Solomon's seal. 3. Spermatogenetic, as eringo, galingale, satyrion, and waterflag. 4. Emmenagogue, as assarabacca, aron, asphodil, birthwort, centaury the less, long and round cypres, costus, capers, calamus aromaticus, carrots, white dittany, and of Crete, eringo, fennel, garlic, grass, knee-holly, peony, valerian, waterflag, parsley, smallage. 5. Stopping the terms, as bistort, comfrey, tormentil. 6. Hydrotic, as carline thistle, china, and farsaparilla. 4. As for the fourth qualities, they are, 1. Alexipharmic, as angelica, long birthwort, bistort, bugloss, costus, cypres, carline thistle, doricum, elecampane, garlic, gentian, swallow-wort, smallage, tormentil, viper's bugloss, and zedoary. 2. Cathar-

tics, as, 1. Purgers of choler, as affarabacca, fern, rhubarb, raphanitic. 2. Of melancholy, as white and black hellebore, and polypody. 3. Of phlegm and water, as asphodil male, white and black briony, wild cucumbers, elder, hermodactils, jalap, mechoacan, squills, fowbread, spurge great and small, and turbith. 3. Appropriate; and so, 1. They heat; 1. the head, as doricum, fennel, jalap, mechoacan, peony male and female, and Celtic and Indian spikenard. 2. The neck and throat, as devil's bit, and pilewort. 3. Breast and lungs, as birthwort long and round, calamus aromaticus, cinquefoil, elecampane, liquorice, orris English and Florentine, and squills. 4. The heart, as angelica, borage, bugloss, butterbur, basil, carline thistle, doricum, scorzonera, tormentil, valerian white and red, and zedoary. 5. The stomach, as avens, fennel, galingale greater or less, ginger, radish, and spikenard Celtic and Indian, and elecampane. 6. The bowels, as ginger, valerian great and small, and zedoary. 7. The liver, as carline thistle, china, dog's grass, fennel, gentian, knee-holly, parsley, rhubarb, raphanitic, celandine, smallage, cinquefoil, asparagus, and turmeric. 8. The spleen, as ash, birthwort round, carline thistle, capers, fern male and female, fennel, gentian, parsley, asparagus, and waterflag. 9. The reins and bladder, as basil, burdock, carline thistle, china, cypress long and round, dropwort, knee-holly, marshmallows, parsley, smallage, sperage, spatling poppy, spikenard Celtic and Indian, saxifrage white, and valerian. 10. The womb, as birthwort long and round, galingale greater and less, hog's fennel, and peony male and female. 11. The fundament, as pilewort. 12. The joints, as bear's breech, costus, ginger, hermodactils, jalap, and mechoacan. 2. They cool, 1. the head, as rose-root. 2. The stomach, as bistort, endive, succory, and fow-thistles. 3. The liver, as endive, madder, and succory.

II. BARKS, are, 1. hot, and so in the first degree; as citrons, lemons, oranges, pockwood, and tamarisk. In the second, as capers, cinnamon common and winter, cassia lignea, and frankincense. In the third, as mace. 2. Cold, and so in the first degree, as oak and pomegranates. In the third, as mandrakes. 2. As for the fourth qualities, they are, 1. cathartic; as, 1. purgers of choler, as barberries. 2. Of phlegm and water, as elder, dwarf elder, laurel, and spurge. 2. Appropriate; and so, 1. They heat, 1. the head, as winter cinnamon. 2. The heart, as cinnamon, cassia lignea, citrons, lemons, mace, and walnuts. 3. The stomach, as cassia lignea, cinnamon, citrons, lemons, oranges, and saffra. 4. The lungs, as cassia lignea, cinnamon, and walnuts. 5. The liver, as barberries, bays, and winter cinnamon. 6. The spleen, as ash, bays, and capers. 7. The reins and bladder, as bays and saffra. 8. The womb, as cassia lignea and cinnamon. 2. They cool the stomach, as pomegranate-peels.

III. Woods,

III. Woods, are, 1. Hot, as aloes, box, ebony, guaiacum, nephriticum, rhodium, rosemary, saffrafas, tamarisk. 2. Cold, as cypress, fanders (white, red, and yellow), and willow. As for the fourth qualities, they are appropriate, 1. To the head, as rosemary. 2. To the heart and stomach, as of aloes. 3. The bowels and bladder, as rhodium. 4. The liver, spleen, reins, and bladder, as nephriticum. 5. The breast, stomach, and bladder, as saffrafas. 6. To the spleen, as tamarisk. 7. The heart and spirits, as fanders.

IV. LEAVES, are, 1. Temperate, as bugle, cinquefoil, betony, flixweed, goat's-rue, hart's-tongue, fluellin, maiden-hair, cammoca black and golden, Paul's betony, trefoil, wall-rue, and wood-rose. 2. Hot, and so in the first degree; as agrimony, avens, borrag, buglofs, basil, cleavers, cetrach, chervil, camomile, cowslips, distaff-thistle, eyebright, marshmallows, melilot, lady's thistle, and self-heal. In the second; as alehoof, Alexanders, archangel, betony, bay, broom, bawm, costmary, cuckoo-flowers, carduus benedictus, centaury the less, chamepitys, dill, double-tongue, devil's bit, hoar-hound, Indian leaf, lady's mantle, maudlin, mugwort, marigold, marjoram, mercury, oak of Jerusalem, pimpernel male and female, parsley, poleymountain, periwinkle, rosemary, smillage, scurvy-grafs, sage, fanicle, scabious, fena, foldanella, tansey, tobacco, vervain, and wormwood common and Roman. In the third; as angelica, arsefmart biting, brooklime, briony white and black, bank-creffes, calamint, clary, dwarf-elder, dodder of thyme, featherfew, fleabane, germander, glasswort, herb-mastic, lavender, lovage, mints, mother of thyme, nettles, organy, pilewort, pennyroyal, rue, southernwood male and female, celandine, sneefewort, favin, favory summer and winter, spike, thyme, and water-creffes. In the fourth; as crow-foot, dittander, garden-creffes, leeks, rosa folis, sciatica-creffes, stone-crop, spurge. 3. Cold, and so in the first degree; as arach, arsefmart mild, burdock, burnet, colt's foot, hawkweed, mallows, pellitory of the wall, forrel, wood-forrel, shepherd's-purse, violets, yarrow. In the second; as buckthorn, chickweed, daisies, dandelion, duck's meat, endive, knotgrafs, lettuce, plantane, purslain, fumitory, succory, strawberry, tansey wild, willow. In the third; as nightshade and fengreen. In the fourth; as hemlock, henbane, mandrakes, poppies. 4. Dry, and so in the first degree; as agrimony, arsefmart mild, burdocks, cleavers, chervil, camomile, cowslips, colt's foot, double-tongue, eyebright, flixweed, hawkweed, marshmallows, melilot, periwinkle, shepherd's purse, self-heal, and fena. In the second, as betony, alehoof, Alexanders, archangel, betony, bugle, buckthorn, broom, birch, bay, burnet, costmary, cuckoo-flowers, carduus benedictus, centaury the less, chichory, dill, distaff-thistle, dandelion, devil's bit, endive, featherfew, fumitory, Indian leaf, lady's mantle, maudlin, mugwort,

wort, marjoram, mercury, pimpernel, plantanes, parsley, rosemary, sorrel, smallage, silver-weed, strawberry, sage, fanicle, scabious, foldanella, scurvy-grass, tobacco, yervain, wormwood common and Roman, wood-sorrel, and willow. In the third; as angelica, arsefmart hot, brooklime, briony white and black, bank-creffes, calamint, chamepitys, cinquefoil, clary, dwarf-elder, epithymum, fleabane, germander, glasswort, hoarhound, herb-mastic, herb of grace, lavender, lovage, mints, mother of time, organy, pilewort, pennyroyal, poley-mountain, southernwood male and female, celandine, sneefewort, favin, savory summer and winter, silk-tansy, thyme, and trefoil. In the fourth; as crowfoot, garden-creffes, garlic, leeks, onions, rosa folis, spurge, and wild rue. 5. Moist, and so in the first degree; as borragge, bugloss, basil, mallows, marigolds, and pellitory of the wall. In the fourth; as arach, chickweed, daisies, duck's meat, lettuce, purslain, fow-thistles, violets, and water-lilies. 2. As for the second qualities, they are, 1. mollifying; as arach, bay, beets, cypress, fleawort, mallows, marshmallows, pellitory of the wall, and violets. 2. Hardening, as duck's meat, houseleek, herbs cold, nightshade, purslain. 3. Opening, as endive, garlic, mallows, marshmallows, onions, pellitory of the wall, fuccory, and wormwood. 4. Binding, as amomum, agnus costus, cypress, cinquefoil, comfrey, bawm, fleawort, horsetail, ivy, knotgrass, bay, melilot, myrtles, oak, plantane, purslain, shepherd's purse, sorrel, sengreen, and willow. 5. Drawing, as birthwort, dittany, garlic, leeks, onions, pimpernel, and all hot leaves. 6. Cleansing, as arach, beets, cetrach, chamepitys, dodder, hoarhound, liverwort, pimpernel, pellitory of the wall, southernwood, asparagus, willow, and wormwood. 7. Extenuating, as camomile, hyssop, juniper, mugwort, mother of thyme, pennyroyal, stechas, and thyme. 8. Anodyne, as arach, calamint, chamepitys, camomile, dill, henbane, hops, hog's fennel, marjoram, mother of thyme, parsley, rosemary, rue, and wormwood. 9. Dis-cussing, as arach, beets, camomile, chickweed, dill, maiden hair, marshmallows, mints, melilot, marjoram, pellitory of the wall, rue, southernwood male and female, and stechas; also bawm, docks, cleavers, cinquefoil, mallows, scordium, water-creffes. 10. Expelling wind, as camomile, dill, epithymum, fennel, garlic, juniper, marjoram, organy, savory winter and summer, smallage, and wormwood. 3. As for the third qualities, they are, 1. Suppurating, as mallows, marshmallows, and white lilies. 2. Glutinating, as agrimony, bugle, centaury, chamepitys, cinquefoil, comfrey, germander, horsetail, knotgrass, mallows, marshmallows, maudlin, pimpernel, rupturewort, strawberries, self-heal, tobacco, tormentil, wood-chervil, and woundwort. 3. Spermatogenic, as clary, rocket, and herbs hot, moist, and windy. 4. Emmenonagogenic, as bishop's weed, betony, broom, basil, cabbages, centaury, camomile, calamints, dodder, dittany, fennel, garlic, germander, hoarhound, hartwort,

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St. John's wort, maiden-hair, marjoram, mugwort, nettles, organy, pimpernel, poly-mountain, parsley, rue, rosemary, southernwood, sage, smallage, favin, scordium, thyme, mother of thyme, wormwood, and water-creffes. 5. Stopping the terms ; as comfrey, houseleek, knot-grafs, myrtles, plantane, shepherd's purse, strawberries, and water-lilies. 4. As for the fourth qualities, they are, 1. Alexipharmic, as alifanders, betony, carduus benedictus, calamint, carline-thistle, agrimony, fennel, garlic, germander, hoarhound, juniper, maiden-hair, organy, pennyroyal, poly-mountain, plantane, rue, southernwood, smallage, scordium, and wormwood. 2. Cathartic, as, 1. Purgers of choler, as centaury, groundfel, hops, mallows, peaches, fena, and wormwood. 2. Of melancholy, as dodder, epithymum, fumitory, oxeye, and fena. 3. Of phlegm and water, as danewort, briony, white and black elder, hedge-hyssop, laurel, mercury, mezerion, spurge, fena, and sneefewort. 3. Appropriate, and so, 1. They heat, 1. The head ; as betony, costmary, carduus benedictus, cowslips, eyebright, featherfew, goat's rue, herb-mastic, lavender, laurel, lovage, maudlin, melilot, mother of thyme, pennyroyal, rosemary, celandine, scurvy-grafs, sneefewort, fena, spike, thyme, vervain. 2. The throat ; as archangel white and red, and devil's bit. 3. The breast ; as betony, bay, bawm, calamint, camomile, distaff-thistle, fennel, germander, hyssop, hoarhound, Indian leaf, maiden-hair, melilot, nettle, oak of Jerusalem, organy, periwinkle, rue, scabious, and thyme. 4. The heart ; as angelica, elecampane, borrag, bugloss, bay, bawm, basil, carduus benedictus, goat's rue, rue, rosemary, southernwood male and female, fena, and wood-roof. 5. The stomach ; as avens, bay, bawm, broom, fennel, Indian leaf, mints, mother of thyme, parsley, sage, schenanth, smallage, thyme, and wormwood common and Roman. 6. The liver ; as agrimony, alecost, ash, bay, assarabacca, centaury the less, chamepitys, fennel, germander, fox-gloves, hops, hoarhound, hyssop, lady's thistles, maudlin, mother of thyme, pimpernel male and female, parsley, poly-mountain, smallage, celandine, samphire, sage, scordium, fena, foldanella, spikenard, toad-flax, and water-creffes. 7. The bowels ; as alehoof, Alexanders, and camomile. 8. The spleen ; as agrimony, ash-tree, bay, centaury the less, cetrach, chamepitys, epithymum, fox-gloves, germander, hops, hoarhound, hart's tongue, maiden-hair, mother of thyme, parsley, poly-mountain, smallage, samphire, sage, scordium, fena, toad-flax, tamarisk, water-creffes, and wormwood. 9. The reins and bladder ; as agrimony, betony, brooklime, bay, broom, chervil, costmary, camomile, clary, germander, hops, maudlin, marshmallows, melilot, mother of thyme, nettles, organy, pimpernel male and female, pennyroyal, rupturewort, rocket, samphire, schenanth, saxifrage, scordium, spikenard, toad-flax, vervain, and water-

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creffes.

creffes. 10. The womb ; as angelica, archangel, basil, calamint, costmary, dittany of Crete, devil's bit, featherfew, fleabane, maudlin, mugwort, Mayweed, melilot, mints, nettles, organy, pennyroyal, periwinkles, schenanth, sage, favin, scordium, tansey, thyme, and vervain. 11. The joints ; as agrimony, arsefmart hot, camomile, costmary, cowslips, garden-creffes, St. John's wort, melilot, rosemary, rue, sciatica-creffes, sage, stechas, and water-creffes. 2. They cool, 1. The head ; as fumitory, houseleek, lettuce, plantane, strawberry, teasels, violets, water-lily, willow, and wood-forrel. 2. The throat ; as bramble, orpine, privet, and strawberries. 3. The breast ; as bramble, colt's foot, moneywort, orpine, plantane, poppy, mulberry, sorrel, strawberry, violet, and wood-forrel. 4. The heart ; as burnet, viper's bugloss, lettuce, sorrel, strawberry, violet, water-lily, and wood-forrel. 5. The stomach, as dandelion, endive, hawkweed, lettuce, orpine, purslain, sorrel, succory, strawberry, sow-thistles, and violet. 6. The liver ; as dandelion, endive, fumitory, lettuce, liver-wort, nightshade, purslain, sorrel, strawberry, succory, water-lily, and wood-forrel. 7. The bowels ; as buckthorn, burnet, fumitory, mallows, orpine, and plantane. 8. The spleen ; as endive, fumitory, lettuce, and succory. 9. The reins and bladder ; as houseleek, knot-grass, lettuce, mallows, moneywort, plantane, purslain, water-lily, and yarrow. 10. The womb ; as arach, burdocks, endive, lilies, myrtles, moneywort, purslain, sengreen, succory, sow-thistles, water-lily, and wild tanfy. 11. The joints ; as henbane, houseleek, lettuce, nightshade, vine, and willow-leaves.

V. FLOWERS ; are, 1. Hot, and so in the first degree ; as betony, borrage, bugloss, camomile, melilot, oxeye, and stechas. In the second ; as amomus, bawm, clove-gilliflowers, hops, jessamine, lavender, rocket, saffron, spikenard, schenanth, and rosemary. In the third ; as agnus castus, epithymum, honey-suckles, wall-flowers, or winter gilliflowers. 2. Cold, and so, in the first degree ; as mallows, red, white, and damask, roses, and violets. In the second ; as anemony, endive, succory, and water-lilies white and yellow. In the third ; as balaustines. In the fourth ; as henbane and poppies. 3. Moist, and so in the first degree ; as borrage, bugloss, endive, mallows, and succory. In the second ; as violets and water-lilies. 4. Dry, and so in the first degree ; as camomile, melilot, oxeye, saffron, and roses. In the second ; as anemony, clove-gilliflowers, hops, lavender, peony, rocket, rosemary, and spikenard. In the third ; as balaustines, chamepitys, epithymum, germander, and woodbine. 2. As for the second qualities, they are, 1. Mollifying, as mallows, saffron, and white lilies. 2. Binding, as agnus castus, balaustines, bawm, clove-gilliflowers,

flowers, melilot, endive, saffron, fuccory, and red roses. 3. Cleansing, as beans, damask roses, and elders. 4. Extenuating, as camomile, flower-de-luce, melilot, and stechas. 5. Anodyne, as camomile, centaury, dill, melilot, and rosemary. 6. Helping burnings, as mallows, marshmallows, and white lilies. 7. Discussing, as camomile, dill, mallows, marshmallows, melilot, and stechas, &c. 8. Expelling wind, as camomile, dill, schenanth, and spikenard. As for the third qualities, they are, 1. Suppurating, as saffron and white lilies. 2. Glutinating, as centaury and balauftins. 3. Emmenonagoric, as betony, camomile, centaury, bawm, rosemary, peony, sage, schenanth, and wall-flowers. 4. Stopping the terms, as balauftins and water-lilies. 4. As for the fourth qualities, they are, 1. Alexipharmic, as betony and centaury, 2. Cathartic, as 1. Purgers of choler, as damask roses, peaches, and violets. 2. Of phlegm, as broom and elder. 3. Appropriate, and so, 1. They heat, 1. the head, as betony, camomile, cowslips, lavender, melilot, peony, rosemary, sage, self-heal, and stechas. 2. The breast, as betony, bawm, scabious, and schenanth. 3. The heart, as bawm, borrage, buglofs, rosemary, saffron, and spikenard. 5. The liver, as camomile, centaury, betony, elder, schenanth, and spikenard. 6. The spleen, as betony and wall-flowers. 7. The reins and bladder, as betony, marshmallows, melilot, schenanth, and spikenard. 8. The womb, as betony, flower-de-luce, sage, and schenanth. 9. The joints, as camomile, cowslips, melilot, and rosemary. 2. They cool, 1. the head, as poppies, roses, violets, and water-lilies. 2. The breast and heart, as roses, violets, and water-lilies. 3. The stomach, as roses and violets. 4. The liver and spleen, as endive, and fuccory. 3. They moisten the heart, as borrage, buglofs, and violets. 4. They dry it, as bawm, betony, and rosemary-flowers.

VI. FRUITS, are, 1. temperate, as currants, dates, figs, pine-nuts; raisins; and febestens. 2. Hot, and so in the first degree; as sweet almonds, cypress-nuts, hasel-nuts, jujubes, and green walnuts. In the second, as ben-nuts, capers, fistic-nuts; hasel-nuts dry, nutmegs, and dry walnuts. In the third, as anacardium, bitter-almonds, carpobalsamum, cloves, cubebs, and juniper-berries. In the fourth, as pepper, guinea pepper, and the rest. 3. Cold, and so in the first degree; as citrons, pears, prunes, and quinces. In the second, as apples, cucumbers, galls, gourds, lemons, melons, oranges, pompions, pomegranates, peaches, and prunes. In the third, as mandrakes. In the fourth, as stramonium. 4. Moist, and so in the first degree; as citrons, lemons, oranges inner rind. In the second, as gourds, melons, peaches, and prunes. 5. Dry, and so in the first degree; as juniper-berries.

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In the second, as bay-berries, ben-nuts, capers, fiftic-nuts, nutmegs, pears, pine-nuts, and quinces. In the third, as cloves and galls. In the fourth, as all peppers.

2. As for the second qualities, they are, 1. Binding, as barberries, chefnuts, cherries, cornels, services, acorns and their cups, galls, medlars, myrtle-berries, nutmegs, olives, pears, peaches, and pomegranates. 2. Extenuating, as sweet and bitter almonds, bay-berries, and juniper-berries. 3. Anodyne, as bay-berries, figs, ivy-berries, juniper-berries, currants, all peppers, raisins, and walnuts. 4. Discussives, as capers and all peppers. 5. Expelling wind, as bay-berries, juniper-berries, nutmegs, and all peppers. 3. As for the third qualities, they are, 1. Glutinating, as acorns, acorn-cups, currants, dates, and raisins. 2. Spermatogenetic, as sweet-almonds, figs, pine-nuts, and raisins of the sun. 3. Emmenonagogic, as capers and ivy-berries. 4. Stopping the terms, as barberries. 5. Diuretic, as winter cherries. 4. As for the fourth qualities, they are, 1. Alexipharmic, as bay-berries, citrons, juniper-berries, pepper, pomecitrons, and walnuts. 2. Cathartic, as, 1. Purgers of choler, as cassia fistula, citrine myrobolans, prunes, raisins, and tamarinds. 2. Of melancholy, as Indian myrobolans. 3. Of phlegm, as colocynthis, wild cucumbers, and myrobolans. 3. Appropriate, and so, 1. They heat, 1. The head, as anacardia, cubebs, and nutmegs. 2. The breast, as almonds bitter, cubebs, dates, figs, haseel-nuts, jujubes, raisins of the sun, and pine-nuts. 3. The heart, as juniper-berries, nutmegs, and walnuts. 4. The stomach, as almonds sweet, ben, cloves, juniper-berries, nutmegs, olives, and pine nuts. 5. The spleen, as capers. 6. The reins and bladder, as almonds bitter, cubebs, juniper-berries, raisins of the sun, and pine-nuts. 7. The womb, as juniper-berries, bay-berries, nutmegs, and walnuts. 2. They cool, 1. The breast, as oranges, lemons, prunes, and sebestens. 2. The heart, as citrons, lemons, oranges, pears, pomegranates, and quinces. 3. The stomach, as apples, citrons, cucumbers, cherries, cornels, currants, services, gooseberries, gourds, lemons, medlars, musk melons, oranges, pears, pompions, and quinces. 4. The liver, as barberries, and coolers of the stomach. 5. The reins and womb, as strawberries, and the same.

VII. SEEDS, are 1. Hot, and so in the first degree; as coriander, fenugreek, gro-mel, linseed, lupines, and rice. In the second, as basil, dill, nettles, orobus, rocket, and smallage. In the third, as amomus, anniseed, bishop's weed, carraway, cardamoms, carrots, cummin, fennel, hartwort, navew, nigella, and staves acre. In the fourth, as mustard-feed and water-creffes. 2. Cold, and so in the first degree; as barley. In the second, as citruls, cucumbers, endive, gourds, lettuce, melons,

night-

nightshade, pompions, purslain, sorrel, and succory. In the third, as hemlock, henbane, and poppies white and black. 3. Moist, and so in the first degree; as mallows. 4. Dry, and so in the first degree; as barley, beans, fennel, fenugreek, and wheat. In the second, as lentils, nightshade, orobus, poppies, and rice. In the third, as anniseed, carraway, coriander, cummin, bishop's weed, dill, gromel, nigella parley, and smallage. 2. As for the second qualities, they are, 1. Molli-fying; as fenugreek, linseed, mallows, and nigella. 2. Hardening; as purslain-feed. 3. Binding; as barberries, purslain, rose-seeds, and shepherd's purse. 4. Cleanf-ing; as barley, beans, lupines, nettles, and orobus. 5. Anodyne, as amomus, car-rots, cardamoms, cummin, dill, fenugreek, gromel, linseed, orobus, panic, and parley. 6. Discussing; as carrots, dill, fenugreek, nigella, and linseed; also bar-ley, coriander, darnel, lupines, mallows, and marshmallows, helping swellings. 7. Expelling wind; as anniseed, carraway, carrots, cummin, dill, fennel, hartwort, nigella, parley, smallage, and wormwood. 3. As for the third qualities, they are, 1. suppurating; as darnel, fenugreek, French barley, and linseed. 2. Glutinating; as darnel, lupines, and orobus. 3. Spermatogenetic; as alstree-keys, beans, cicers, and rocket. 4. Emmenonagogic, as amomus, annis, bishop's weed, carrots, ci-cers, fennel, hartwort, parley, lovage, sperage, and smallage. 5. Stopping the terms; as burdock, cummin, and rose-seeds. 6. Lithontriptic; as gromel, mallows, and marshmallows. 4. As for the fourth qualities, they are, 1. Alexipharmic; as annis, bishop's weed, cardamoms, citrons, fennel, lemons, oranges, and smallage. 2. Appropriate; and so, 1. They heat, 1. the head; as fennel, marjoram, and piony. 2. The breast; as nettles. 3. The heart; as basil, rue, and mustard-feed. 4. The stomach; as amomus, annis, bishop's weed, cardamoms, cubebs, cummin, grains of paradise, and smallage. 5. The liver; as amomus, annis, bishop's weed, carraway, carrots, cummin, fennel, smallage, and sperage. 6. The spleen; as annis, carraway, and water-creffes. 7. The reins and bladder; as cicers, gromel, nettles, rocket, and saxifrage. 8. The womb; as piony and rue. 9. The joints; as mus-tard-feed, rue, and water-creffes. 2. They cool, 1. The head; as lettuce, white poppies, and purslain. 2. The breast; as white poppies and violets. 3. The heart; as citrons, lemons, oranges, and sorrel-feed: also the four greater and smaller coldseeds, viz. of citruls, cucumbers, gourds, and melons; endive, lettuce, purslain, and succory, cool the liver, spleen, reins, bladder, womb, and joints; and the white and black poppy-feed do the same.

VIII. Gums, are, 1. Temperate ; as elemi, lacca, and tragacanth. 2. Hot, and so in the first degree ; as bdellium and ivy-gum. In the second, as frankincense, galbanum, mastic, myrrh, olibanum, pitch, rosin, and styrax. In the third, as ammoniacum. In the fourth, as euphorbium. 3. Cold, as gum arabic. 2. As for the second qualities, they are, 1. Mollifying, as ammoniacum, bdellium, colophonia, galbanum, opopanax, turpentine, rosin, pitch, and styrax. 2. Binding ; as gum arabic, sandarac or Jupiter-gum, and tragacanth. 3. As for the third qualities, they are, 1. Emmenagogue, as styrax. 2. Lithontriptic, as cherry-gum. 4. As for the fourth qualities, they are cathartic, as opopanax, purging phlegm.

IX. JUICES, are 1. Temperate ; as liquorice, and white starch. 2. Hot, and so in the first degree ; as sugar. In the second, as labdanum. In the third, as assafoetida, and benjamin. 3. Cold, and so in the second degree ; as acacia, and sanguis draconis. In the third, as hypocistis. In the fourth, as opium. As for the fourth qualities, they are cathartic ; as aloes, manna, and scammony, purging choler.

X. WATERS, are, 1. Hot ; and so, 1. Concocting phlegm : 1. In the head ; as betony, calamint, camomile, eyebright, fennel, marjoram, primroses, rosemary, and sage. 2. In the breast and lungs, as bawm, betony, carduus benedictus, flower-de-luce, hoarhound, hyssop, maiden-hair, scabious, and self-heal. 3. In the heart, as bawm and rosemary. 4. In the stomach, as chervil, fennel, marigolds, mints, mother of thyme, thyme, and wormwood. 5. In the liver, as agrimony, centaury, costmary, marjoram, maudlin, organy, fennel, and wormwood. In the spleen, as calamint, water-creffes, and wormwood. In the reins and bladder, as burnet, elecampane, nettles, pellitory of the wall, rocket, and saxifrage. In the womb, as calamint, lovage, mother of thyme, mugwort, pennyroyal, and favin. 2. Concocting melancholy ; 1. In the head, as fumitory and hops. 2. In the breast, as bawm and carduus benedictus. 3. In the heart, as bawm, borrag, bugloss, and rosemary. 4. In the liver, as chichory, endive, and hops. 5. In the spleen, as dodder, hart's tongue, tamarisk, and thyme. 2. Cold ; and so, 1. Cooling the blood ; as endive, fumitory, lettuce, purslain, sorrel, succory, violets, and water-lilies. 2. Cooling choler ; 1. In the head ; as black cherries, lettuce, nightshade, plantain, poppies, and water-lilies. 2. In the breast and lungs, as colt's foot, poppies, and violets. 3. In the heart, as roses, sorrel, quinces, violets, walnuts green, and water-lilies. 4. In the stomach, as houseleek, lettuce, nightshade, purslain, quinces, roses, fengreen, and violets. 5. In the liver, as endive, nightshade, purslain, succory, and water-lilies. 6. In the reins

reins and bladder; as black cherries, endive, houseleek, plantane, strawberries, succory, water-lilies, and winter-cherries. 7. In the womb; as endive, lettuce, purslain, roses, succory, and water-lilies. Thus of the vegetable simples; now follow their compositions, which are,

I. WINES, which are, 1. hot; heating, 1. The head; as betony, fennel, eyebright, rosemary, sage, and stechas. 2. The heart; as borrag and buglofs. 3. The breast; as elecampane, hyssop, and raisins. 4. The stomach; as black cherries, forrel, and wormwood. 5. The liver; as germander. 6. The spleen; as tamarisk. 7. The reins and bladder; as sage and winter-cherries. 2. Binding, as myrtles, roses, and quinces. 3. Provoking sweat, as pockwood. 4. Purging; 1. Phlegm, as squills. 2. Choler yellow, as scammony. 3. Melancholy, as black hellebore. 4. Water, as danewort, thymelæ, and chamelæ.

II. DECOCTIONS; which are, 1. Raficient, as barley, cicers, and ptisan. 2. Temperate, as the common, and of flowers and fruits. 3. Heating the breast; as the pectoral. 4. Aromatic, as the two for wounded men. 5. Sudorific, as guaiacum. 6. Purgers, of, 1. The blood; as maiden-hair and fumitory. 2. Choler yellow, as of fruits. 2. Of phlegm, as stechas and thyme. 3. Melancholy, as of epithimum, and sena of Gereon. 4. Mixed humours, as fumitory and myrobolans.

III. SYRUPS; which are, 1. Altering, and so concocting, 1. Choler: 1. In the head; as poppies and water-lilies. 2. In the breast; as jujubes, pomegranates, and violets. 3. In the stomach; as agresta, aceroſe, myrtles, oxyſaccharate, quinces, and roses. 4. In the heart, as the aceroſe, citrons, lemons, and oranges. 5. In the liver; as endive and succory. 2. Phlegm; 1. In the head; as betony, stechas, and annardine honey. 2. In the breast; as hyssop, hoarhound, calamint, liquorice, maiden-hair, and scabious. 3. In the heart; as the byzantine. 4. In the stomach; as mints, oxymel of squills, and common honey of roses and wormwood. 5. In the liver; as eupatorium, and two and five roots. 6. In the matrix, as mugwort. 3. Melancholy; 1. In the heart; as borrag, buglofs, and apples. 2. In the liver and spleen; as hops, epithimum, spleenwort, and fumitory. 2. Purging; 1. Choler, as of chichory with rhubarb, peach-flowers, rhubarb, roses, violets, and mercurial honey. 2. Phlegm, as of briony roots, hermodactils, and oxymel, helleborated, and julianizans. 3. Mixed humours, as diaſereos.

IV. LONCHS; which are, 1. Astringent, as of diascordium, fleawort, and poppies. 2. Absterfive, as of colt's foot, colewort, pine-kernels, hoarhound, bastard-saffron, sorrel, squills, raisins, fanum, and expertum.

V. PRESERVES; which are, 1. Hot, heating and corroborating, 1. The heart; as apples, citron-peels, myrobolans, chebs, nutmegs, Indian nuts, and orange-peels. 2. The stomach; as acorus, aromatical reed, galingale, ginger, citron-peels, Indian nuts, pears, quinces, and walnuts. 3. The reins; as eringo-roots. 2. Cold, cooling and strengthening. 1. The stomach; as myrobolans, emblics, cherries, medlars, peaches, prunes, and services. 2. The liver; as chichory roots.

VI. CONSERVES; which are, 1. Hot, heating, 1. The head; as of acorus, betony, eyebright, lavender-flowers, marjoram, peony, roses, rosemary, sage, and stechas-flowers. 2. The breast; as bawm, hyssop, and maiden-hair. 3. The heart; as borrag, bugloss, clove-giliflowers, orange, and rosemary-flowers. 4. The stomach; as elecampane, mints, and wormwood. 5. The liver; as elder-flowers, fumitory, and wormwood. 6. The spleen; as fumitory and spleenwort. 7. The womb; as bawm, marjoram, and rosemary-flowers. 2. Cold, cooling, 1. The head; as roses, violets, and water-lily flowers. 2. The breast; as violets. 3. The heart; as roses, sorrel, and violets. 4. The stomach; as roses and violets. 5. The liver; as chichory, roses, and violet-flowers. 6. The spleen; as roses and violets. 7. The reins; as roses. 8. The womb; as roses and violets. 9. The joints; as roses and violets.

VII. POWDERS; which are, 1. Hot, heating, 1. The head; as diacorum, diapenias, and pleris arconticon. 2. The breast; as diapienidion, diatragacanth hot, diacalaminth, diahyssopum, diaprasium, and diathamaron. 3. The heart; as aromaticum, rosatum, and caryophyllatum, dianthos, and diaxylo-aloes. 4. The stomach; as the rosat aromatic, diagalanga, dianifum, diaxylo-aloes, diacyminum, diacinnamomum, diazinziber, diapoliticum, diatrion-piperion. 5. The liver; as dialacca, diacurcuma, diacinnamomum, diacalaminth. 6. The spleen; as diacapparis. 7. The womb; as diacalaminth. 2. Cold, cooling, 1. The head; as diapapaver, and diatragacanth. 2. The heart; as diarrhodon abbatis, diatrionsfantalón. 3. The stomach; as diarrhodon abbatis and diatrionsfantalón. 4. The liver; as diarrhodon abbatis, diatrionsfantalón. 5. The spleen; as diatrionsfantalón, diarrhodon abbatis. 6. The womb; as diatrionsfantalón, diarrhodon abbatis. 7. The joints, as diarrhodon abbatis, diatrionsfantalón.

VIII. ELECTUARIES; which are, 1. Hot, heating, 1. The head, as confectio anacardina and theriaca diateffaron. 2. The breast, as diaireos. 3. The heart, as confectio alkermes. 4. The stomach, as excitro of bay-berries, and rosata novela. 5. The liver, as diacinnamomum. 6. The spleen, as diacapparis. 2. Cold; cooling, 1. The head, as the resumptivum. 2. As for the second qualities, they are astringent, as diacydonium, miclera, and triphera minor. 3. As for the third qualities, they are, 1. Lithontriptic, as lithontribon. 2. Venereal, as diasatyrium, diacaryon, and triphera far. 4. As for the fourth qualities, they are cathartic; purging, 1. Choler, as diaprunum fol. de psyllio, and of roses. 2. Phlegm, as benedicta laxativa, diaphenicon, diaturbith, hiera picra, with agaric, pachy, hermetis, and diacolocynth. 3. Melancholy, as diafenna, confectio hamech, diapolypodium, and hieralogadium. 4. Mixed humours, as diacarthamum, diaturbith with rhubarb, and hiera ruffi.

IX. PILLS; which are, 1. Anodyne, as laudanum, ex cynoglossa, and of styrax. 2. Cathartic; purging, 1. Choler; 1. In the head, as the golden pills, and arabic. 2. In the liver, as of eupatorium and rhubarb. 2. Phlegm; In the head, as the cochie of Hieria with agaric, coloquintida, alhandal, and of six and eight things. 2. In the breast, as of agaric, and hiera with agaric. 3. In the stomach, as the aloephangine, mastic, stomach, of turbith, common and pestilential. 4. In the joints, as the arthritic, fetid, of hermodactils, opopanax, sagapen, and farcocol. 3. Melancholy; in the liver and spleen, as of fumitory, and indie. 4. Water, as of euphorbium and mezereon. 5. Mixed humours; 1. In the head, as the cochie lucis greater and smaller, and sine quibus. 2. In the stomach, as the golden assaeth, aloes, hiera simple, imperial, turbith, mastic, and pestilential. 3. In the liver, as of three things, and halicacabum. 4. In the whole body, as the aggregative.

X. TROCHES; which are, 1. Hot, as of xylaloes, saffron, and crocomagma damoe. 2. Cold, as of camphire and sanders. 2. As for the second qualities, they are, 1. Astringent, as of barberries and diaspermato. 2. Emollient; as of capers. 3. Opening, as of bitter almonds, benjamin, anniseed, lacca, eupatorium, myrrh, roses, rhubarb, winter-cherries, and wormwood. 4. Absterfive, as cyphoeos. 5. Anodyne, as camphire, diarrhodon, diaspermato. 4. As for the fourth qualities, they are cathartic; purging, 1. Choler, as of rhubarb. 2. Phlegm, as of agaric, alhandal, and hamech. 3. Mixed humours, as of violets.

XI. OILS; which are, 1. Hot; heating, 1. The stomach; as of mastic, mints, nard, and wormwood. 2. The liver; as of bitter almonds, mastic, nard, peaches, and wormwood. 3. The spleen; as of capers, behen, lilies, and spike. 4. The womb; as the cherine, dill, flower-de-luce, saffron, and nard. 5. The joints; as of nard, nutmegs, and Indian nuts. 6. The nerves; as of costus, euphorbium, mastic, pepper, sweet marjoram, and elecampane. 2. Cold, cooling, 1. The head; as of mandrakes and poppies. 2. The stomach; as the lentisk, myrtine, myrtle, omphacine, quinces, and roses. 3. The breast; as of violets and water-lilies. 4. The liver; as the stomachical. 5. The reins; as water-lilies. 6. The nerves; as lentisk. 7. The womb; as of gourds, lentisk, myrtles, quinces, and water-lilies. 3. Dry, as of nard, nuts, and ricinus. 4. Moist, as of sweet almonds, fresh olives, cucumbers, gourds, melons, oily-pulse, and violets. 2. As for the second qualities, they are, 1. Mollifying, as daffodil, linseed, styrax, camomile, and lilies. 2. Resolving, as dill, camomile, and euphorbium. 3. Loosening, as of sweet-almonds, jessamine, and olives. 4. Binding, as of mastic, mints, myrtles, myrtine, lentisk, and cenanthe. 5. Drawing, as of bays, dill, St. John's wort, and rue. 6. Cleansing, as of myrrh, elder, radish, and ricinus. 7. Digesting, as of bitter almonds, nuts, olives, and rue. 8. Anodyne, as of camomile, dill, bays, elder, St. John's wort, poplars, lilies, wall-flowers, almonds-sweet, linseed, olives, omphacine, fleawort, poppies, and roses. 3. As for the third qualities, they are, 1. Suppurating, as of lilies. 2. Glutinating, as of liquid amber, balsam, myrrh, and tobacco. 3. Incarning, as fallad-oil. 4. Cicatrizing, as oils of such simples. 5. Venereal, as of fistic-nuts. 6. Lithontripric, as of cherries and citron-kernels. 7. Hypnotic, as of henbane, nightshade, lilies of the water, mandrakes, and poppies. 4. As for the fourth qualities, they are cathartic, as the enicine and of thymelæa.

XII. OINTMENTS; which are, 1. Hot, as of bdellium, dialthea, arregon, martiatum, agrippa, and for the stomach. 2. Cold, as the white and red camphorate, Galen's refrigerant, poplars, roseate, and violets. 2. As for the second qualities, they are, 1. Mollifying, as of briony, dialthea, resumptivum, tetrapharmacon, and artanite. 2. Binding, as comitissæ, defensivum, Galen's refrigerant, citrinum, populeon, and the pectoral. 3. Drawing, as the fuscum, arregon, agrippæ, martiatum. 4. Cleansing, as the citron and egyptiac. 5. Anodyne, as the anodyne, pectoral, dialthea, arregon, martiatum, resumptivum, populeon, and Galen's refrigerant. 5. Hypnotic, as populeon. 7. Resolving, as of bays, agrippæ, arregon, and marti-

aureum. 3. As for the third qualities, they are, 1. Suppurating, as basilicon. 2. Incarnating, as aureum, and comitifia. 3. Glutinating, as aureum and the citron, and potable. 4. Cicatrizing, as album and rubrum. 4. As for the fourth qualities, they are cathartic, as agrippæ, and of fow-bread.

XIII. CERATES; which are, 1. Hot, as of euphorbium, and that for the stomach. 2. Cold, as the fantaline.

XIV. PLAISTERS; which are, 1. Hot, as that for the stomach. 2. Cold, as that of hemlock. 2. As for the second qualities, they are, 1. Mollifying, as diachylon, gratia Dei, that of melilot and oxycroceum. 2. Binding, as of the crust of bread, and diaphenicon. 3. Drawing, as of betony, diachylon magnum, with gums of melilot and oxycroceum. 4. Cleansing, as isis gal. de janua divinum. 5. Anodyne, as of bay-berries, melilot, oxycroceum. 6. Resolving, as great diachylon, with gums of cummin, bay-berries, melilot, and oxycroceum. 3. As for the third qualities, they are, 1. Suppurating, as diachylon simple, the great with gums, and of mucilages. 2. Incarnating, as of betony, diapalma, de janua, and nigrum. 3. Glutinating, as diapalma, and nigrum. 4. Cicatrizing, as diapalma.

XV. EXTRACTS; which are, 1. Glutinating, as of comfrey. 2. Spermatogenetic, as of satyrion. 3. Cathartic; purging, 1. Choler, as of rhubarb. 2. Phlegm, as of agaric and aloes. 3. Melancholy, as of black hellebore.

XVI. SALTS; which are, 1. Cathartic; purging, 1. By coughing, as of St. John's wort and polypody. 2. By urine, as of camomile, bean-stalks, broom, gentian, juniper, hedge-hyssop, rest-harrow, and wormwood. 3. By the womb, as of bawm,celandine, and mugwort. 4. By sweat, as of pockwood.

Thus far of vegetables, considered as medicinal and alimentary, with their principal differences, in respect of the whole or parts; as trees or herbs, by their roots, barks, woods, leaves, flowers, fruits, buds, seeds or grains, tears, liquors, gums, rofins, juices, things bred thereof, and waters, &c. with their temperature and qualities; first, second, and third; and as appropriate and medicinal in general. As also of their compounds, viz. spirits, waters, tinctures, wines, vinegars, decoctions, syrups, robs,

robs, lohochs, preserves, conferves, sugars, powders, electuaries, pills, troches, oils, ointments, cerecloths, plaisters, and chymicals : and of roots, barks, leaves, flowers, fruits, buds, grains or pulses, juices, and oils. As alimentary in general, we have fully spoken ; there now remains the more particular enquiry thereinto, from the plants and herbs themselves, which are the basis of the whole.

The differences of vegetables, as to their parts and qualities, the synonymous names of plants and herbs, and the several diseases they are found to cure, according to the experience of all botanical authors, now follow in alphabetical order, and form a complete arrangement of family and physical herbs, which grow spontaneously in the different parts of this island, for the natural cure or nourishment of its diseased inhabitants.

END OF THE TREATISE.

CULPEPER's ENGLISH PHYSICIAN,

CONTAINING THE

H E R B A L.

A M A R A - D U L C I S.

CONSIDERING diverse shires in this nation give divers names to one and the same herb, and that common name which it bears in one county is not known in another; I shall take the pains to set down all the names that I know of each herb. Pardon me for setting that name first which is most common to myself; besides amara-dulcis, some call it morral, others bitter-sweet, some woody-nightshade, and others felon-wort.

DESCRIPTION. It grows up with woody stalks even to a man's height, and sometimes higher: the leaves fall off at the approach of winter, and spring out of the same stalk again at spring time; the branch is encompassed about with a whitish bark, and hath a pith in the middle of it; the main branch brancheth itself out into many small ones, with clasps, laying hold on what is next to them, as vines do; it bears many leaves, they grow in no order at all, or at leastwise in no vulgar order; the leaves are longish, though somewhat broad and pointed at the ends; many of them have two little leaves growing at the end of their footstalk, some of them have but one, and some none; the leaves are of a pale green colour; the flowers are of a purple colour, or of a perfect blue, like to violets, and they stand many of them together in knots; the berries are green at the first, but when they are ripe they are very red; if you taste them, you shall find them just as the crabs which we in Suffex call bitter-sweet, viz, sweet at first, and bitter afterwards.

No. 5.

P

PLACE.

PLACE. They grow commonly almost throughout England, especially in moist and shady places.

TIME. The leaves shoot out about the latter end of March; if the temperature of the air be ordinary, it flowereth in July, and the seeds are ripe soon after, usually in the next month.

GOVERNMENT AND VIRTUES. It is under the planet Mercury, and a notable herb of his also, if it be rightly gathered under his influence. It is excellent good to remove witchcraft, both in men and beasts; as also all sudden diseases whatsoever. Being tied about the neck, it is one of the most admirable remedies for the vertigo, or dizziness in the head, and that is the reason (as Tragus saith) the people in Germany commonly hang it about their cattle's neck when they fear any such evil hath befallen them. Country people commonly use to take the berries of it, and, having bruised them, they apply them to felons, and thereby soon rid their fingers of such troublesome guests.

We have now shewn you the external use of the herb; we shall speak a word or two of the internal, and so conclude. Take notice, that it is a mercurial herb, and therefore of very subtle parts, as indeed all mercurial plants are; therefore take a pound of the wood and leaves together, bruise the wood, (which you may easily do, for it is not so hard as oak,) then put it in a pot, and put to it three pints of white wine, put on the pot-lid, and shut it close, then let it infuse hot over a gentle fire twelve hours, then strain it out; so you have a most excellent drink to open obstructions of the liver and spleen, to help difficulty of breath, bruises, and falls, and congealed blood in any part of the body, to help the yellow jaundice, the dropsy, and black jaundice, and to cleanse women newly brought to bed. You may drink a quarter of a pint of the infusion every morning; it purgeth the body very gently, and not churlishly as some hold. And, when you find good by this, remember me.

A L H E A L.

IT is called alheal, Hercules's alheal, and Hercules's woundwort; because it is supposed that Hercules learned the virtues of this herb from Chiron, when he learned physic of him: some call it panay, and others opopanawort.

DESCRIPTION. Its root is long, thick, and exceeding full of juice, of a hot and biting taste; the leaves are great and large, and winged almost like ash-tree leaves, but that they are somewhat hairy, each leaf consisting of five or six pair of such wings set one against the other, upon footstalks, broad below, but narrow toward the end; one of the leaves is a little deeper at the bottom than the other, of a fair, yellowish,

yellowish, fresh, green colour; they are of a bitterish taste being chewed in the mouth. From among those riseth up a stalk, green in colour, round in form, great and strong in magnitude, five or six feet high in altitude, with many joints and some leaves thereat; towards the top come forth umbels of small yellow flowers, after which are passed away, you may find whitish, yellow, short, flat, seeds, bitter also in taste.

PLACE. Having given you the description of the herb from the bottom to the top, give me leave to tell you that there are other herbs called by this name; but, because they are strangers in England, I gave only the description of this which is easy to be had in the gardens of divers.

TIME. Although Gerrard saith, that they flower from the beginning of May to the end of December, experience teacheth them that keep it in their gardens, that it flowers not till the latter end of the summer, and sheds its seeds presently after.

GOVERNMENT AND VIRTUES. It is under the dominion of Mars; hot, biting, and cholic; and remedies what evils Mars afflicts the body of man with by sympathy, as viper's flesh attracts poison, and the loadstone iron. It kills the worms, helps the gout, cramp, and convulsions; provokes urine, and helps all joint-achs; it helps all cold griefs of the head; the vertigo, falling sickness, and lethargy; the wind cholic, obstructions of the liver and spleen, stone in the kidneys and bladder. It provokes the terms, expels the dead birth; it is excellent good for the grief of the sinews, itch, sores, and tooth-ach; the biting of mad dogs and venomous beasts, and purgeth choler very gently.

A L K A N E T.

BESIDES the common name, it is called orchanet and Spanish bugloss, and, by apothecaries, anchusa.

DESCRIPTION. Of the many sorts of this herb, there is but one to grow commonly in this nation, of which one take this description: it hath a great and thick root of a reddish colour, long, narrow, and hairy leaves, green like the leaves of bugloss, which lie very thick upon the ground, and the stalks rise up compassed about thick with leaves, which are less and narrower than the former; they are tender and slender; the flowers are hollow, small, and of a reddish purple colour; the seed is greyish.

PLACE. It grows in Kent near Rochester, and in many places in the west country, both in Devonshire and Cornwall.

TIME.

TIME. They flower in July and the beginning of August, and the seed is ripe soon after, but the root is in its prime, as carrots and parsnips are, before the herb runs up to stalk.

GOVERNMENT AND VIRTUES. It is an herb under the dominion of Venus, and indeed one of her darlings, though somewhat hard to come by. It helps old ulcers, hot inflammations, burnings by common fire, and St. Anthony's fire, by antipathy to Mars; for these uses, your best way is to make it into an ointment. Also if you make a vinegar of it, as you make vinegar of roses, it helps the morpew and leprosy; if you apply the herb to the privities, it draws forth the dead child; it helps the yellow jaundice, spleen, and gravel in the kidneys. Dioscorides saith, it helps such as are bitten by venomous beasts, whether it be taken inwardly or applied to the wound; nay, he saith further, if any one that hath newly eaten it do but spit in the mouth of a serpent, the serpent instantly dies. It stays the flux of the belly, kills worms, helps the fits of the mother; its decoction made in wine, and drunk, strengthens the back, and easeth the pains thereof; it helps bruises and falls, and is as good a remedy to drive out the small pox and measles as can be. An ointment made of it is excellent for green wounds, pricks, or thrusts.

ADDER'S TONGUE, OR SERPENT'S TONGUE.

DESCRIPTION. THIS small herb hath but one leaf, which grows with the stalk a finger's length above the ground, being fat, and of a fresh green colour, broad like the water plantane, but less, without any middle rib in it; from the bottom of which leaf on the inside, riseth up ordinarily one, sometimes two, or three, small slender stalks, the upper half whereof is somewhat bigger, and dented with small round dents of a yellowish green colour, like the tongue of an adder or serpent. The root continues all the year.

PLACE. It groweth in moist meadows, and such-like places.

TIME. It is to be found in April and May, for it quickly perisheth with a little heat.

GOVERNMENT AND VIRTUES. It is an herb under the dominion of the Moon in Cancer, and therefore, if the weakness of the retentive faculty be caused by an evil influence of Saturn, in any part of the body governed by the Moon, or under the dominion of Cancer, this herb cures it by sympathy. It cures those diseases after specified in any part of the body under the influence of Saturn by antipathy.

It is temperate in respect of heat, but dry in the second degree. The juice of the leaves drunk with the distilled water of horsetail is a singular remedy for all manner of wounds, in the breast, bowels, or other parts of the body, and is given with good

ſucceſs unto thoſe who are troubled with caſting, vomiting, or bleeding at the mouth or noſe, or otherwiſe downwards. The ſaid juice, given in the diſtilled water of oaken buds, is very good for women who have their uſual courſes, or the whites, flowing down too abundantly. It helps ſore eyes. The leaves infuſed or boiled in oil omphacine, or unripe olives ſet in the ſun for certain days, or the green leaves ſufficiently boiled in the ſaid oil, will make an excellent green baſam, not only for green and freſh wounds, but alſo for old and inveterate ulcers; eſpecially if a little fine clear turpentine be diſſolved therein. It alſo ſtayeth and repreſſeth all inflammations that ariſe upon pains, by hurts or wounds, either taken inwardly or outwardly applied. For ruptures or burſten bellies, take as much of the powder of the dried leaves as will lie on a ſixpence, or leſs, according to the age of the party, in two ounces of horſe-tail, or oak-bud water, ſweetened with ſyrup of quinces. Uſe it every morning for the ſpace of fifteen days. But, before you enter upon the uſe of this or any other medicine, the gut, if it fall into the ſcrotum, muſt be reduced by a ſurgeon, and a trufs muſt be worn to keep it up; alſo the party muſt avoid all violent motions, and lie as much as may be in bed, or on a couch. Fabritius Hildanus ſays, That ſome have been cured of great ruptures by lying in bed, when they could be cured no other way.

A G R I M O N Y.

DESCRIPTION. THIS hath divers long leaves, ſome greater, ſome ſmaller, ſet upon a ſtalk, all of them dented about the edges, green above, and greyiſh underneath, and a little hairy withal. Among which riſeth up uſually but one ſtrong, round, hairy, brown ſtalk, two or three feet high, with ſmaller leaves ſet here and there upon it; at the top whereof grow many yellow flowers one above another in long ſpikes, after which come rough heads of ſeeds hanging downwards, which will cleave to and ſtick upon garments, or any thing that ſhall rub againſt them. The root is black, long, and ſomewhat woody, abiding many years, and ſhooting a freſh every ſpring; which root, though ſmall, hath a reaſonable good ſcent.

PLACE. It grows upon banks, near the ſides of hedges or rails.

TIME. It flowereth in July and Auguſt, the ſeed being ripe ſhortly after.

GOVERNMENT AND VIRTUES. It is moderately hot and moiſt, according to the nature of Jupiter. It is under Jupiter and the ſign Cancer, and ſtrengthens thoſe parts under that planet and ſign, and removes diſeaſes in them by ſympathy, and thoſe under Saturn, Mars, and Mercury, by antipathy, if they happen in any part of the body governed by Jupiter, or under the ſigns Cancer, Sagittarius, or Piſces, and therefore muſt needs be good for the gout, either uſed outwardly in an oil or

ointment, or inwardly in an electuary or syrup, or concremented juice; for which see the latter end of the book. It has however been recommended in dropsies and the jaundice. Externally, it has indeed its use: I have seen very bad sore legs cured by bathing and fomenting them with a decoction of this plant.

It is of a cleansing and cutting faculty, without any manifest heat, moderately drying and binding. It openeth and cleanseth the liver, helpeth the jaundice, and is very beneficial to the bowels, healing all inward wounds, bruises, hurts, and other distempers. The decoction of the herb made with wine, and drunk, is good against the biting and stinging of serpents, and helps them that have foul, troubled, or bloody, water, and causes them to make water clear and speedily. It also helpeth the cholic, cleanseth the breast, and rideth away the cough. A draught of the decoction, taken warm before the fit, first removes, and in time rideth away, the tertian or quartan agues. The leaves and seed, taken in wine, stay the bloody-flux; outwardly applied, being mixed up with old swine's grease, it helpeth old sores, cancers, and inveterate ulcers; and draweth forth thorns, splinters of wood, nails, or any other such things, gotten into the flesh. It helpeth to strengthen the members that be out of joint; and, being bruised and applied, or the juice dropped in, it helpeth foul and imposthumped ears.

The distilled water of the herb is good to all the said purposes, either inwardly or outwardly, but is a great deal weaker.

I cannot stand to give you a reason in every herb why it cureth such diseases, but, if you please to peruse my judgment in the herb wormwood, you shall find it there; and it will be well worth your while to consider it in every herb; you shall find them true through the book.

WATER AGRIMONY.

IT is called in some countries, water hemp, bastard hemp, and bastard agrimony, eupatorium, and hepatorium, because it strengthens the liver.

DESCRIPTION. The root continues a long time, having many long slender strings; the stalks grow up about two feet high, sometimes higher; they are of a darker purple colour; the branches are many, growing at distances the one from the other, the one from the one side of the stalk, the other from the opposite point; the leaves are winged, and much indented at the edges; the flowers grow at the tops of the branches, and are of a brown yellow colour, spotted with black, having a substance within the midst of them like that of a daisy; if you rub them between your fingers,

they smell like rosin, or cedar when it is burnt ; the seeds are long, and easily stick to any woollen thing they touch.

PLACE. They delight not in heat, and therefore they are not so frequently found in the southern parts of England as in the north, where they grow frequently ; you may look for them in cold grounds, by ponds, and ditch sides, as also by running waters ; sometimes you shall find them grow in the midst of the waters.

TIME. They all flower in July and August, and the seed is ripe presently after.

GOVERNMENT AND VIRTUES. It is a plant of Jupiter as well as the other agrimony, only this belongs to the celestial sign Cancer. It healeth and drieth, cutteth and cleanseth thick and tough humours of the breast, and for this I hold it inferior to but few herbs that grow ; it helps the cachexia, or evil disposition of the body ; the dropsy and yellow jaundice ; it opens obstructions of the liver, and mollifies the hardness of the spleen ; being applied outwardly, it breaks imposthumes ; taken inwardly, it is an excellent remedy for the third-day ague ; it provokes urine and the terms, it kills worms, and cleanseth the body of sharp humours, which are the cause of itch, scabs, &c. The smoke of the herb, being burnt, drives away flies, wasps, &c. and it strengthens the lungs exceedingly. Country people give it to their cattle when they are troubled with the cough, or broken winded.

A L E H O O F OR G R O U N D - I V Y.

SEVERAL countries give it several names, so that there is scarce an herb growing of that bigness that hath got so many : it is called car's foot, ground-ivy, gill-go-by-ground, and gill-creep-by-ground, tun-hoof, haymaids, and alehoof.

DESCRIPTION. This well-known herb lieth, spreadeth, and creepeth, upon the ground, shooting forth roots at the corners of the tender jointed stalks, set all along with two round leaves at every joint, somewhat hairy, crumpled, and unevenly dented about the edges with round dents : at the joints likewise with the leaves, toward the end of the branches, come forth hollow long flowers, of a bluish purple colour, with small white spots upon the lips that hang down. The root is small with strings.

PLACE. It is commonly found under the hedges, and on the sides of ditches, under houses, or in shadowed lanes, and other waste grounds, in almost every part of the land.

TIME. They flower somewhat early, and abide so a great while, the leaves continue green until winter, and sometimes abide, except the winter be very sharp and cold.

GOVERN-

GOVERNMENT AND VIRTUES. It is an herb of Venus, and therefore cures the diseases the causes by sympathy, and those of Mars by antipathy. You may usually find it all the year long, except the year be extreme frosty. It is quick, sharp, and bitter, in taste, and is thereby found to be hot and dry; a singular herb for all inward wounds, exulcerated lungs or other parts, either by itself, or boiled with other the like herbs; and, being drunk, it in a short time easeth all griping pains, windy and cholerick humours in the stomach, spleen, or belly; helps the yellow jaundice by opening the stoppings of the gall and liver, and melancholy; by opening the stoppings of the spleen, expelleth venom or poison, and also the plague; it provoketh urine and women's courses. The decoction of it in wine drunk for some time together procureth ease unto them that are troubled with the sciatica, or hip-gout, as also the gout in the hands, knees, or feet; and, if you put to the decoction some honey, and a little burnt allum, it is excellent good to gargle any sore mouth or throat, and to wash the sores and ulcers in the privy parts of man or woman; it speedily helpeth green wounds, being bruised and bound thereto. The juice of it, boiled with a little honey and verdigrease, doth wonderfully cleanse fistulas, ulcers; and stayeth the spreading or eating of cancers and ulcers; it helpeth the itch, scabs, wheals, and other breakings-out, in any part of the body. The juice of celandine, field daisies, and ground ivy clarified, and a little fine sugar dissolved therein, and dropped into the eyes, is a sovereign remedy for all the pains, redness, and watering, of them; as also for the pin and web, skins and films growing over the sight; it helpeth beasts as well as men. The juice dropped into the ears doth wonderfully help the noise and ringing of them, and helpeth the hearing which is decayed. It is good to tun up with new drink, for it will so clarify it in a night, that it will be fitter to be drunk the next morning; or, if any drink be thick with removing, or any other accident, it will do the like in a few hours.

A L E X A N D E R.

IT is also called alifander, horse parsley, and wild parsley, and the black pot-herb; the seed of it is that which is usually sold in the apothecaries shops for Macedonian parsley-feed.

DESCRIPTION. It is usually sown in all the gardens in Europe, and so well known that it needs no further description.

TIME. They flower in June and July, and the seed is ripe in August.

GOVERNMENT AND VIRTUES. It is an herb of Jupiter, and therefore friendly to nature, for it warmeth a cold stomach, and openeth stoppings of the liver, and wonder-

spleen; it is good to remove women's courses, to expel the after-birth, to break wind, to provoke urine, and help the stranguary; and these things the seeds will do likewise. If either of them be boiled in wine, or be bruised and taken in wine, it is also effectual against the biting of serpents. And now you know what alexander pottage is good for, that you may no longer eat it out of ignorance, but out of knowledge.

BLACK ALDER TREE.

DESCRIPTION and NAMES. THIS groweth up like a small shrub, or bush, and spreads in many branches; the wood is white, and red at the core, the bark blackish with white spots, the inner bark yellow, the leaves somewhat like the common alder, the flowers are white, and come forth at the joints with the leaves; the berries are round, first green, then red and black when they are ripe. The Latins call it *frangula*, and *alnus nigra baccifera*; in Hampshire we usually know it by the name of dogwood.

PLACE. This tree or shrub may be found plentifully in St. John's wood, by Hornsey, and in the woods upon Hampstead heath, as also at a wood called the Old Park at Barcomb in Suffex, near the brook's side.

TIME. It flowereth in May, and the berries are ripe in September.

GOVERNMENT and VIRTUES*. It is a tree of Saturn. The inner bark hereof purgeth downwards both choler and phlegm, and the watery humours of such as have the dropsy, and strengtheneth the inward parts again by binding. If the bark hereof be boiled with agrimony, wormwood, dodder, hops, and some fennel, with smallage, endive, and succory roots, and a reasonable draught taken every morning for some time together, it is very effectual against the jaundice, dropsy, and the evil disposition of the body; especially if some suitable purging medicine have been taken before to avoid the grosser excrements; it purgeth and strengtheneth the liver and spleen, cleansing them from such evil humours and hardness as they are afflicted with. It is to be understood, that these things are performed by the dried bark, for the fresh green bark taken inwardly provoketh strong vomitings, pains in the stomach, and gripings in the belly: yet, if the decoction may stand and settle two or three days until the yellow colour be changed black, it will not work

* The green leaves of this tree applied to tumours, discusses them, and takes off inflammations. Being put into traveller's shoes, they ease pain, and remove weariness. A black colour, like ink, is made with the bark of alder rubbed off with a rusty iron, and infused in water for some days. Some use it to dye.

so strongly as before, but will strengthen the stomach, and procure an appetite to meat. The outer bark contrariwise doth bind the body, and is helpful for all lasks and fluxes thereof; but this must also be dried first, whereby it will work the better. The inner bark hereof, boiled in vinegar, is an approved remedy to kill lice, to cure the itch, and take away scabs by drying them up in a short time; it is singular good to wash the teeth, to take away the pains, to fasten those that are loose, to cleanse them and keep them sound. The leaves are good fodder for kine, to make them give more milk.

If in the spring time you use the herbs before mentioned, and will but take a handful to each of them, and to them add a handful of elder buds, and, having bruised them all, boil them in a gallon of ordinary beer when it is new, and, having boiled them half an hour, add this to three gallons more, and let them work together, and drink a draught of it every morning, half a pint, or thereabouts. It is an excellent purge for the spring, to consume the flegmatic quality the winter hath left behind it, and withal keep your body in health, and consume those evil humours which the heat of summer will readily stir up. Esteem it as a jewel.

THE COMMON ALDER TREE.

DESCRIPTION. IT groweth to a reasonable height, and spreads much, if it likes the place. It is generally so well known unto the country people, that I conceive it needless to tell them that which is no news.

PLACE AND TIME. It delighteth to grow in moist woods and watery places; flowering in April or May, and yielding the seed in September.

GOVERNMENT AND USE. It is a tree under the dominion of Venus, and of some watery sign or other, I suppose Pisces; and therefore the decoction or distilled water of the leaves is excellent against burning and inflammation, either with wounds or without, to bathe the place grieved with, and especially for that inflammation in the breast which the vulgar call an ague. If you cannot get the leaves (as in winter it is impossible), make use of the bark in the same manner. The leaves and bark of the alder tree are cooling, drying, and binding. The fresh leaves laid upon swellings dissolveth them, and stayeth the inflammations; the leaves put under the bare feet galled with travelling are a great refreshing to them; the said leaves gathered while the morning dew is on them, and brought into a chamber troubled with fleas, will gather them thereinto, which, being suddenly cast out, will rid the chamber of those troublesome bedfellows.

ANGELICA*.

THERE is both garden and wild angelica, some also reckon up a water kind: it groweth up with great hollow stalks, four or five feet high, having broad divided leaves, of a pale green colour; at the top cometh forth large umbels of white

* That is, the *angelical* or *angel-like herb*. On what occasion this excellent name was first given unto it, I know not; unless it were for the excellent virtues thereof, or for that God made it known to man by the ministry of an angel. I suppose the former case rather to be true: however, as I am not able to prove the other, so I think no man can give any good reason to the contrary. For this we know, that God hath made his angels ministering spirits, to serve us for the safeguard of our souls, and also of our bodies. But, upon what occasion soever the name was given, it is excellent, and so are its properties.——Angelica is hot and dry, at least in the third degree. All the latter writers agree upon this, and experience proveth the same, that it is good against poison, pestilent air, and the pestilence itself. The practitioners of Germany write thus of it: If any man be suddenly taken either with the pestilence or with any pestilent ague, with too much sweating, let him drink of the powder of the root half a drachm, mingled with a drachm of treacle, in three or four spoonfuls of the water of angelica, distilled from the roots; and, after his going to bed, covering himself well, let him fast, at the least, three hours after; which if he do, he will begin to sweat, and, by the help of God, he will be cured of his disease. For want of treacle one may take a whole drachm of the root of angelica in powder, with so much of the distilled water as aforesaid, and it will have the same effect.——The root of angelica well steeped in vinegar, and smelt to in time of the pestilence, and the same liquor being sometimes drunk fasting, preserveth from infection. But, in my judgment, it is better to take an orange or a lemon, cut off the top, pick out the meat, prick it full of small holes, put into it a piece of sponge, or fine linen cloth, dipped in the aforesaid vinegar, and smell to it.——The water distilled out of the roots of angelica, or the powder of the same, is good against gnawing and pains of the belly occasioned with cold, if the body be not bound. It is good against all inward diseases, as pleurisy, in the beginning before the heat of the inflammation be come into the body: for that it dissolveth and scattereth abroad such humours as use to cause the pleurisy. Moreover it is good for the diseases of the lungs, if they come of a cold cause; and from the strangurian, if from a cold cause, or of a stopping. It is good for a woman that is in travail. It expelleth wind that is in the body, and easeth the pain that cometh from the same. The root may be sod in wine or water, as the nature of the sick requireth. The root or the juice, put into an hollow tooth, taketh away the ach; the same effect hath the distilled water, being put into the ear. The juice and water of angelica quickens the eye sight, and breaks the little films that cover the eyes, causing darkness of sight. Of the roots of angelica and pitch may be made a good emplaster against the bitings of mad beasts. The water, the juice, or the powder of this root, sprinkled upon the diseased place, is a very good remedy against old and deep sores, for they scour and cleanse

white flowers, after which succeedeth flat seeds, somewhat whitish; the root perisheth every year if it be suffered to seed.

PLACE AND TIME. Angelica is Latin and English; it grows commonly in our gardens, and wild also in many places; flowers about July, and the seed is ripe soon after.

GOVERNMENT AND VIRTUES. It is an herb of the sun in Leo; let it be gathered when he is there, the Moon applying to his good aspect; let it be gathered either in his hour, or in the hour of Jupiter, let Sol be angular. Observe the like in gathering the herbs of other planets, and you may happen to do wonders. In all epide-mical diseases caused by Saturn, this is as good a preservative as grows; it resists poison by defending and comforting the heart, blood, and spirits; it doth the like

cleanse them, and cover the bones with flesh. The water of the same, in a cold cause, is good to be laid on places diseased with the gout and sciatica. For it stauncheth the pain, and melteth away the tough humours that are gathered together. The seed is of like virtue with the root. The wild angelica, that groweth here in the low woods, and by the water side, is not of such virtue as the other; howbeit the surgeons see the root of it in wine, to heal green wounds. These properties I have gathered out of German writers. I have not as yet proved them all myself, but divers of them I have proved, and have found them to be true. I have set down the peel of an orange, or lemon; the meat whereof is also commended by physicians to be a good preservative both against poison, and the infection of pestilence.——Late writers affirm, that the roots of angelica are opposite to all poison and infection. If any be infected with the plague, or poisoned, they give him immediately to drink a drachm of the powder of this root, with wine in the winter; and, in summer, with distilled water of carduus benedictus; then get him to bed, and cover him until he have sweat freely. The same root, being taken fasting in the morning, or but held in the mouth, doth keep and preserve the body from the evil of the air. The leaves of angelica, pounded with the leaves of rue and honey, are very good to be laid to the bitings of mad dogs, presently taken after the hurt, the wine being drunk wherein the root or leaves of angelica hath been boiled.

To conclude, I have thought good to write on these herbs carduus benedictus and angelica, either because they are not thoroughly known to many; or else that apothecaries would have their secret virtues concealed. But I do not think it fit that any thing should be secret which may be profitable to my country. For God hath not made any thing for the use of a few, but for the common use of all men. And we that are the children of God, ought to frame ourselves so, that we may be like affectioned unto our Father who is beneficial unto all men; who hath made his sun to shine and his rain to rain upon the wicked as well as upon the good; that is to say, who feedeth all, both good and bad; by heat and moisture, which proceed from the sun and the rain, all things grow upon the earth, whereby our lives are maintained. I conclude, that, forasmuch as Almighty God is good unto all men, we ought to be like minded, and not to keep secret nor to hide any thing that may profit one another.

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againſt the plague and all epidemical diſeaſes, if the root be taken in powder to the weight of half a drachm at a time with ſome good treacle in carduus water, and the party thereupon laid to ſweat in his bed; if treacle be not to be had, take it alone in carduus or angelica water. The ſtalks or roots candied, and eaten faſting, are good preſervatives in time of infection, and at other times to warm and comfort a cold ſtomach. The root alſo ſteeped in vinegar, and a little of that vinegar taken ſometimes faſting, and the root ſmelled unto, is good for the ſame purpoſe. A water diſtilled from the root ſimply, or ſteeped in wine, and diſtilled in glaſs, is much more effectual than the water of the leaves; and this water drunk two or three ſpoonfuls at a time, eaſeth all pains and torments coming of cold and wind, ſo as the body be not bound, and, taken with ſome of the root in powder at the beginning, helpeth the pleuriſy, as alſo all other diſeaſes of the lungs and breaſt, as coughs, phthiſic, and ſhortneſs of breath; and a ſyrup of the ſtalks doth the like. It helps pains of the cholic, the ſtranguary, and ſtopping of the urine, procureth women's courſes, and expelleth the afterbirth; openeth the ſtoppings of the liver and ſpleen, and briefly eaſeth and diſcuſſeth all windineſs and inward ſwellings. The decoction drunk before the fit of an ague, that the patient may ſweat, if poſſible, before it comes on, will in two or three times taking rid it quite away. It helps digeſtion, and is a remedy for a ſurfeit. The juice, or the water, being dropped into the eyes or ears, helps dimneſs of ſight and deafneſs; the juice, being put into the hollow teeth, eaſeth their pains. The roots in powder made up into a plaſter with a little pitch, and laid on the biting of a mad dog, or any other venomous creature, doth wonderfully help. The juice, or water dropped or tents wet therein, and put into old filthy deep ulcers, or the powder of the root, in want of either, doth cleanſe and cauſe them to heal quickly, by covering the naked bones with fleſh. The diſtilled water, applied to places pained with the gout or ſciatica, doth give a great deal of eaſe.

The wild angelica is not ſo effectual as the garden, although it may be ſafely uſed to all the purpoſes aforeſaid.

A M A R A N T H U S.

BESIDES this common name, by which it is beſt known by the florists of our days, it is alſo called flower-gentle, flower-velure, floramor, and velvet-flower.

DESCRIPTION. It being a garden flower, and well known to every one that keeps it, I might forbear the deſcription; yet notwithstanding, becauſe ſome deſire it, I ſhall give it. It runneth up with a ſtalk a cubit high, ſtreaked, and ſomewhat red-diſh toward the root, but very ſmooth, divided towards the top with ſmall branches,

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among which stand long broad leaves of a reddish green colour, and slippery. The flowers are not properly flowers, but tufts, very beautiful to behold, but of no smell, of a reddish colour; if you bruise them, they yield juice of the same colour; being gathered, they keep their beauty a long time; the seed is of a shining black colour.

TIME. They continue in flower from August till the frosts nip them.

GOVERNMENT AND VIRTUES. It is under the dominion of Saturn, and is an excellent qualifier of the unruly actions and passions of Venus, though Mars also should join with her. The flowers dried and beaten into powder, stop the terms in women, and so do almost all other red things. And, by the icon, or image, of every herb, the antients at first found out their virtues. Modern writers, they laugh at them for it, but I wonder in my heart how the virtue of herbs came at first to be known, if not by their signatures; the moderns have them from the writings of the ancients, the ancients had no writings to have them from. But to proceed, the flowers stop all fluxes of blood whether in man or woman, bleeding either by the nose or wound. There is also a sort of amaranthus which bears a white flower, which stops the whites in women, and the running of the reins in men, and is a most gallant anti-venereal, and a singular remedy for the French pox.

A N E M O N E.

CALLED also wind-flower, because they say the flowers never open but when the wind bloweth: Pliny is my author; if it be not so, blame him. The seed also, if it bears any at all, flies away with the wind.

PLACE AND TIME. They are sown usually in the gardens of the curious, and flower in the spring time. As for description, I shall pass it, they being well known to all those that sow them.

GOVERNMENT AND VIRTUES. It is under the dominion of Mars, being supposed to be a kind of crowfoot. The leaves provoke the terms mightily, being boiled, and the decoction drunk. The body being bathed with the decoction of them, cures the leprosy. The leaves being stamped, and the juice snuffed up the nose, purgeth the head greatly: so doth the root being chewed in the mouth, for it causeth much spitting, and bringeth away many watery and phlegmatic humours, and is therefore excellent for the lethargy. And, when all is done, let physicians say what they please, all the pills in the dispensatory purge not the head like to hot things held in the mouth: being made into an ointment, and the eyelids anointed therewith, it helps inflammations of the eyes, whereby it is palpable that every stronger draweth its weaker light; the same ointment is exceeding good to cleanse malignant and corroding ulcers.

GARDEN ARRACH.

CALLED also orach, and orage.

DESCRIPTION. It is so commonly known to every housewife, it were but labour lost to describe it.

TIME. It flowereth and seedeth from June to the end of August.

GOVERNMENT AND VIRTUES. It is under the government of the moon; in quality cold and moist like unto her. It softeneth and looseneth the body of man being eaten, and fortifieth the expulsive faculty in him. The herb, whether it be bruised and applied to the throat, or boiled, and in like manner applied, it matters not much, it is excellent good for swellings in the throat, the best way I suppose is to boil it, and, having drunk the decoction inwardly, apply the herb outwardly; the decoction of it besides is an excellent remedy for the yellow jaundice.

ARRACH, WILD AND STINKING.

CALLED also vulvaria, from that part of the body upon which the operation is most: also dog's arrach, goat's arrach, and stinking motherwort.

DESCRIPTION. This hath small and almost round leaves, yet a little pointed, and without dent or cut, of a dusky mealy colour, growing on the slender stalks and branches that spread on the ground, with small flowers in clusters set with the leaves, and small seeds succeeding like the rest, perishing yearly, and rising again with its own sowing. It smells like rotten fish, or something worse.

PLACE. It grows usually upon dunghills.

TIME. They flower in June and July, and their seed is ripe quickly after.

GOVERNMENT AND VIRTUES. Stinking arrach is useful as a remedy to help women pained and almost strangled with the mother, by smelling to it; but inwardly taken there is not a better remedy under the moon for that disease. I would be large in commendation of this herb, were I but eloquent. It is an herb under the dominion of Venus, and under the sign Scorpio. The works of God are given freely to man; his medicines are common and cheap, and easy to be found: it is the medicines of the college of physicians that are so dear and scarce to find. I commend it for an universal medicine for the womb, and such a medicine as will easily, safely, and speedily, cure any disease thereof, as the fits of the mother, dislocation, or falling out thereof; it cools the womb being over heated: and let me tell you this, and I will tell you but the truth, heat of the womb is one of the greatest causes of hard labour in childbirth. It makes barren women fruitful, it cleanseth the womb if it be foul,

and

and strengthens it exceedingly; it provokes the terms if they be stopped, and stops them if they flow immoderately: you can desire no good to your womb but this herb will effect it; therefore, if you love children, if you love health, if you love ease, keep a syrup always by you made of the juice of this herb and sugar, or honey if it be to cleanse the womb; and let such as are rich keep it for their poor neighbours, and bestow it as freely as I bestow my studies upon them, or else let them look to answer it another day when the Lord shall come to make inquisition of blood.

A R C H A N G E L.

TO put a gloss upon their practice, the physicians call an herb, which country people vulgarly know by the name of deadnettle, archangel, wherein whether they favour of more superstition or folly, I leave to the judicious reader. There is more curiosity than courtesy to my countrymen used by others in the explanation as well of the names as description of this well-known herb: which, that I may not also be guilty of, take this short description; first, of the red archangel.

DESCRIPTION. This hath divers square stalks, somewhat hairy, at the joints whereof grow two sad green leaves dented about the edges, opposite each other, the lowermost upon long foot stalks, but without any toward the tops, which are somewhat round, yet pointed, and a little crumpled and hairy: round about the upper joints, where the leaves grow thick, are sundry gaping flowers of a pale reddish colour; after which come the seeds, three or four in a husk. The root is small and thready, perishing every year; the whole plant hath a strong scent, but not stinking.

White archangel hath divers square stalks, none standing upright, but bending downward, whereon stand two leaves at a joint, larger and more pointed than the other, dented about the edges, and greener also; more like unto nettle leaves, but not stinging, yet hairy: at the joints, with the leaves, stand larger and more open gaping white flowers, in husks round about the stalks, (but not with such a bush of leaves and flowers set in the top, as is on the other,) wherein stand small roundish black seeds. The root is white, with many strings at it, not growing downward, but lying under the upper crust of the earth, and abideth many years increasing. This hath not so strong a scent as the former.

Yellow archangel is like the white in the stalks and leaves, but that the stalks are more straight and upright, and the joints with leaves are farther asunder, having longer leaves than the former, and the flowers a little larger and more gaping, of a fair yellow colour in most, in some paler. The roots are like the white, only they creep not so much under the ground.

PLACE.

PLACE. They grow almost every where, unless it be in the middle of the street, the yellow most usually in the wet grounds of woods, and sometimes in the dryer, in divers counties of this nation.

TIME. They flower from the beginning of the spring all the summer long.

VIRTUES AND USE. The archangels are somewhat hot, and dryer than the stinging nettles, and used with better success, for the stopping and hardness of the spleen, than they, by using the decoction of the herb in wine, and afterwards applying the herb hot unto the region of the spleen as a plaister, or the decoction with sponges. The flowers of the white archangel are preserved, or conserved, to be used to stay the whites, and the flowers of the red to stay the reds, in women.

A R S E S M A R T.

THE hot arsefmart is called also water pepper, and culrage; the mild arsefmart is called dead arsefmart, porcicaria, or peach-wort, because the leaves are so like the leaves of a peach-tree; it is also called plumbago.

DESCRIPTION OF THE MILD. This hath broad leaves set at the great red joints of the stalks, with semicircular blackish marks on them usually, yet sometimes without. The flowers grow in long spikes usually, either bluish or whitish, with such like seed following. The root is long with many strings thereat, perishing yearly; this hath no sharp taste, as another sort hath, which is quick and biting, but rather sour like sorrel, or else a little drying or without taste.

PLACE. It grows in watery places, ditches, and the like; which for the most part are dry in summer.

TIME. It flowereth in June, and the seed is ripe in August.

GOVERNMENT AND VIRTUES. As the virtue of both these is various, so are also their government; for that which is hot and biting is under the dominion of Mars, but Saturn challengeth the other, as appears by the lead-coloured spot he hath placed upon the leaf. The water arsefmart is of great use in the stone of the kidneys or bladder, a draught of it being taken every morning for two or three months together. A country gentleman used a load of this herb in a year to make the water, where-with he cured many of the stone. The root or seed, put into an aching hollow tooth, takes off the pain. There is scarce any thing more effectual to drive away flies, for, whatever wounds or ulcers cattle have, if they are anointed with the juice of arsefmart, the flies will not come near, though it is the heat of summer. It is of a cooling and drying quality, and very effectual for putrified ulcers in man or beast, to kill worms, and cleanse the putrified places. The juice thereof dropped in, or otherwise applied, consumeth all cold swellings, and dissolveth the congealed blood of

bruises by strokes, falls, &c. A piece of the root, or some of the seed bruised, and held to an aching tooth, taketh away the pain. The leaves bruised, and laid to the joint that hath a fellon thereon, taketh it away. The juice destroyeth worms in the ears, being dropped into them: if the hot arsefmart be strewed in a chamber, it will soon kill all the fleas; and the herb or juice of the cold arsefmart put to a horse or other cattle's sores will drive away the flies in the hottest time of summer; a good handful of the hot biting arsefmart, put under a horse's saddle will make him travel the better, although he were half tired before: the mild arsefmart is good against hot imposthumes and inflammations at the beginning, and to heal green wounds.

All authors chop the virtues of both sorts of arsefmart together, as men chop herbs for the pot, when both of them are of quite contrary qualities. The hot arsefmart groweth not so high, or tall, as the mild doth, but hath many leaves of the colour of peach leaves, very seldom or never spotted; in other particulars it is like the former, but may easily be known from it, if you will be but pleased to break a leaf of it across your tongue, for the hot will make your tongue to smart, but the cold will not. If you see them both together, you may easily distinguish them, because the mild hath far broader leaves: and our college of physicians, out of their learned care for the public good, *Anglicè*, their own gain, mistake the one for the other in their New Masterpiece, whereby they discover, 1. Their ignorance. 2. Their carelessness; and he that hath but half an eye may see their pride without a pair of spectacles. I have done what I could to distinguish them in their virtues, and when you find not the contrary named, use the cold.

A S A R A B A C C A.

DESCRIPTION. ASARABACCA hath many heads rising from the roots, from whence come many smooth leaves, every one upon his own footstalk, which are rounder and bigger than violet leaves, thicker also, and of a dark green shining colour on the upper side, and of a paler yellow green underneath, little or nothing dented about the edges, from among which rise small, round, hollow, brown, green husks, upon short stalks about an inch long, divided at the brims into five divisions, very like the cups or heads of the henbane seed, but that they are smaller, and these are all the flowers it carrieth, which are somewhat sweet, being smelled unto, and wherein when they are ripe is contained small cornered rough seeds, very like the kernels or stones of grapes or raisins. The roots are small and whitish, spreading divers ways in the ground, and increasing into divers heads, but not running or creeping under the ground as some other creeping herbs do. They are somewhat sweet.

sweet in smell, resembling nardus, but more when they are dry, than green, and of a sharp, but not unpleasant, taste.

PLACE. It groweth frequently in gardens.

TIME. They keep their leaves green all the winter, but shoot forth new in the spring, and with them come forth those heads or flowers which give ripe seed about midsummer, or somewhat after.

GOVERNMENT AND VIRTUES. It is a plant under the dominion of Mars, and therefore inimical to nature. This herb, being drunk, not only provoketh vomiting, but purgeth downward, and by urine also, purging both choler and phlegm: if you add to it some spikenard with the whey of goat's milk, or honeyed water, it is made more strong, but it purgeth phlegm more manifestly than choler, and therefore doth much help pains in the hips and other parts. Being boiled in whey, it wonderfully helpeth the obstructions of the liver and spleen, and is therefore profitable for the dropsy and jaundice, being steeped in wine and drunk. It helps those continual agues that come by the plenty of stubborn humours: an oil made thereof by setting it in the sun, with some laudanum added to it, provoketh sweating, the ridge of the back being anointed therewith, and thereby driveth away the shaking fits of the ague. It will not abide any long boiling, for it loseth its chief strength thereby; nor much beating, for the finer powder doth provoke vomits and urine, and the coarser purgeth downwards. The common use hereof, is to take the juice of five or seven leaves in a little drink to cause vomitings; the roots have also the same virtue, though they do not operate so forcibly, yet they are very effectual against the biting of serpents, and therefore are put as an ingredient both into mithridate and Venice treacle. The leaves and roots being boiled in lye, and the head often washed therewith while it is warm, comforteth the head and brain that is ill affected by taking cold, and helpeth the memory.

I shall desire ignorant people to forbear the use of the leaves: the roots purge more gently, and may prove beneficial in such as have cancers, or old putrified ulcers, or fistulas upon their bodies, to take a drachm of them in powder in a quarter of a pint of white wine in the morning. The truth is, I fancy purging and vomiting medicines as little as any man breathing, for they weaken nature, nor shall ever advise them to be used unless upon urgent necessity. If a physician be nature's servant, it is his duty to strengthen his mistress as much as he can, and weaken her as little as may be.

ASPARAGUS, SPARAGUS, OR SPERAGE.

DESCRIPTION. IT riseth up at first with divers white green scaly heads, very brittle or easy to break while they are young, which afterwards rise up in very long
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and slender green stalks, of the bigness of an ordinary riding wand at the bottom of most, or bigger or less, as the roots are of growth; on which are set divers branches of green leaves, shorter and smaller than fennel to the top; at the joints whereof come forth small mossy yellowish flowers, which turn into round berries, green at the first, and of an excellent red colour when they are ripe, shewing like beads of coral, wherein are contained exceeding hard black seeds. The roots are dispersed from a spongy head into many long, thick, and round, strings, whereby it sucketh much nourishment out of the ground, and encreaseth plentifully thereby.

PRICKLY ASPARAGUS, SPARAGUS, or SPERAGE.

DESCRIPTION. IT groweth usually in gardens, and some of it grows wild in Appleton meadow, in Gloucestershire, where the poor people do gather the buds, or young shoots, and sell them cheaper than our garden asparagus is sold in London.

TIME. They do for the most part flower, and bear their berries, late in the year, or not at all, although they are housed in winter.

GOVERNMENT AND VIRTUES. They are both under the dominion of Jupiter. The young buds or branches, boiled in ordinary broth, make the belly soluble and open, and, boiled in white wine, provoke urine, being stopped, and are good against the stranguary, or difficulty of making water. It expelleth the gravel and stone out of the kidneys, and helpeth pains in the reins: if boiled in white wine or vinegar, it is prevalent for them that have their arteries loosened, or are troubled with the hip-gout, or sciatica. The decoction of the roots, boiled in wine and taken, is good to clear the sight, and, being held in the mouth, easeth the tooth ach; and, being taken fasting several mornings together, stirreth up bodily lust in man or woman, whatsoever some have written to the contrary. The garden asparagus nourisheth more than the wild, yet hath it the same effect in all the aforementioned diseases. The decoction of the roots in white wine, and the back and belly bathed therewith, or kneeling or lying down in the same, or sitting therein as a bath, hath been found effectual against pains of the reins and bladder, pains of the mother and cholic, and generally against all pains that happen to the lower parts of the body, and is no less effectual against stiff and benumbed sinews, or those that are shrunk by cramps and convulsions; it also helpeth the sciatica.

A S H - T R E E.

THIS is so well known, that time would be mis-spent in writing a description of it; and therefore I shall only insist upon the virtues of it.

GOVERNMENT AND VIRTUES. It is governed by the sun, and the young tender tops with the leaves taken inwardly, and some of them outwardly applied, are singular good against the biting of the viper, adder, or any other venomous beast: and the water distilled therefrom, being taken in a small quantity every morning fasting, is a singular medicine for those that are subject to the dropfy, or to abate the greatness of those who are too gross or fat. The decoction of the leaves, in white wine, helpeth to break the stone and expel it, and cureth the jaundice. The ashes of the bark of the ash made into lye, those heads bathed therewith, which are leprous, scabby, or scald, are thereby cured. The kernels within the husks, commonly called ashen keys, prevail against stitches and pains in the side, proceeding from wind, and void the stone by provoking urine.

AVENS, called also CLOVE-WORT, and HERB BENET.

DESCRIPTION. THE ordinary avens hath many long, rough, dark-green, winged leaves, rising from the root, every one made of many leaves, set on each side of the middle rib, the largest three whereof grow at the end, and are snipped or dented round about the edges; the other being small pieces, sometimes two, and sometimes four, standing on each side of the middle rib underneath them: among which do rise up divers rough or hairy stalks, about two feet high, branching forth with leaves at every joint, not so long as those below, but almost as much cut in on the edges, some into three parts, some into more. On the tops of the branches stand small pale yellow flowers, consisting of five leaves, like the flowers of cinquefoil, but larger, in the middle whereof standeth a small green head, which, when the flower is fallen, groweth rough and round, being made of many long greenish purple seeds, like grains, which will stick upon your clothes. The root consists of many brownish strings or fibres, smelling somewhat like unto cloves, especially those which grow in the higher, hotter, and drier, grounds, and in the free and clear air.

PLACE. They grow wild in many places under hedge-fides, and by the pathways in fields; yet they rather delight to grow in shadowy than sunny places.

TIME. They flower in May and June for the most part, and their seed is ripe in July at the latest.

GOVERNMENT AND VIRTUES. It is governed by Jupiter, and that gives hopes of a wholesome healthful herb. It is good for the diseases of the chest or breast, for pains and stitches in the sides, and to expel crude and raw humours from the belly and stomach, by the sweet savour and warming quality; it dissolveth the inward con-

gealed blood, occasioned by falls or bruises, and the spitting of blood, if the roots, either green or dried, be boiled in wine and drunk; as also all manner of inward or outward wounds, if they be washed or bathed therewith. The decoction also being drunk, comforteth the heart, and strengtheneth the stomach and a cold brain, and therefore is good in the spring time to open obstructions of the liver, and helpeth the wind cholic; it also helps those that have fluxes, or are bursten, or have a rupture; it taketh away spots and marks in the face, being washed therewith. The juice of the fresh root or powder of the dried root, hath the same effect with the decoction. The root in the spring time steeped in wine doth give it a delicate savour and taste, and, being drunk fasting every morning, comforteth the heart, and is a good preservative against the plague, or any other poison; it helpeth digestion, and warmeth a cold stomach, and openeth obstructions of the liver and spleen. It is very safe, (you need have no dose prescribed,) and is very fit to be kept in every body's house.

ALMOND-TREE.

DESCRIPTION AND NAMES. OF this tree there are two kinds, the one bears sweet fruit, the other bitter; they grow bigger than any peach-tree; I have seen a bitter almond tree in Hampshire as big as a great plumb tree. It hath leaves much like peach-leaves, and is called in Latin *amigdalum*; they grow plentifully in Turkey and Barbary.

NATURE AND VIRTUES. The sweet almonds are hot and moist in the first degree, the bitter dry in the second. It is a plant of Jupiter. The sweet almonds nourish the body, and increase the feed, they strengthen the breath, cleanse the kidneys, and open the passages of urine. There is a fine pleasant oil drawn out of the sweet almonds, which, being taken with sugar-candy, is excellent against dry coughs and hoarseness; it is good for those that have any inward sore, and for such as are troubled with the stone, because it makes slippery the passages of the urine. Bitter almonds also open obstructions of the liver and spleen, cleanse the lungs from phlegm, provoke urine; they expel wind, and provoke womens' courses; the oil of them kills worms, and helps pains of the womb. Some write that bitter almonds preserve from drunkenness, five or six being eaten fasting; the oil of both cleanse the skin; it easeth pains of the head, the temples being anointed therewith; and the oil, with honey, powder of liquorice, oil of roses, and white wax, makes a good ointment for dimness of sight. Also almond butter is very good for a stuffed breast; this kind of butter is made of almonds with sugar and rose-water, which being eaten with violets

is very wholesome and commodious for students, for it rejoiceth the heart, and comforteth the brain, and qualifyeth the heat of the liver.

A C O N I T U M.

OF this there are two sorts, the one bearing blue flowers, the other yellow; it is also called wolf's-bane, and the blue is generally known by the name of monk's-hood.

DESCRIPTION. The wolf's-bane which beareth the blue flower is small, but groweth up a cubit high, the leaves are split and jagged, the flowers in long rows toward the tops of the stalks, gaping like hoods; on the hoary root groweth as it were a little knob, wherewith it spreadeth itself abroad, and multiplieth.

PLACE. The monk's-hood or blue wolf's-bane is very common in many gardens, the other rarely found but in the gardens of some curious herbarists; but groweth in forests and dark low woods and valleys in some parts of Germany and France.

TIME. They flower in April, May, and June.

GOVERNMENT AND DANGER. These plants are hot and dry in the fourth degree, of a martial venomous quality; if they be inwardly taken, they inflame the heart, burn the inward parts, and destroy life itself. Dodonæus reporteth of some men at Antwerp, who unawares did eat some of the monk's-hood in a sallad, instead of some other herb, and died forthwith: this I write that people who have it in their gardens might beware of it.

A L O E, or A L O E S.

NAMES. BY the same name of aloe or aloes is the condensed juice of this plant called in all parts of Europe; the plant is also called sea-houseleek and sea-ay-green.

DESCRIPTION. This plant hath very long leaves, thick, and set round about with short points or crests, standing wide one from another; the root is thick and long; all the herb is of a strong flavour, and bitter taste; out of this herb is drawn a juice, which is dried, and called aloes in different parts of the world.

PLACE. Aloe groweth very plenteously in India, and from thence cometh the best juice; it groweth also in many places of Asia and Arabia, near the sea side, but the juice thereof is not so good as that of India.

GOVERNMENT AND VIRTUES. It is a martial plant, hot in the second degree, and dry in the third, of a very bitter taste; the juice, being refined and clarified from its dross, is of a clear and blackish clean brown colour; it openeth the belly, and purgeth cold phlegmatic and choleric humours, which overburthen and hurt the stomach:

stomach: it is the basis in almost all pills; it comforteth, cleanseth, and drieth up superfluous humours. It may be taken with cinnamon, ginger, mace, galingal, or anniseed, to assuage and drive away pains of the stomach, and to comfort and warm the stomach, and expel phlegm; the same is also good against the jaundice and spitting of blood. Aloe made into powder, and strewed upon new bloody wounds, stoppeth the blood and healeth the wound; likewise, being applied upon old ulcers, it closeth them up, and is a sovereign medicine for ulcers about the secret parts and fundament. The same, boiled with wine and honey, healeth rifts and outgrowings of the fundament, and stoppeth the flux of the hemorrhoids; and, being applied with honey, it taketh away black spots that come by stripes or bruises; it is also good against inflammations, hurts and scabs of the eyes, and against running and dimness of the same. Aloes mixed with oil of roses and vinegar, and laid to the forehead and temples, assuageth the head-ach; the head being often rubbed with aloes mixed with wine keepeth the hair from falling off. The same applied with wine cureth sores of the mouth and gums, the throat, and kernels under the tongue; and outwardly applied it is a good consolidative medicine; stoppeth bleeding, and doth modify and cleanse all corruption.

B A W M.

THIS herb is so well known to be an inhabitant in almost every garden, that I shall not need to write any description thereof, although the virtues of it, which are many, may not be omitted.

GOVERNMENT AND VIRTUES. It is an herb under Jupiter, and under Cancer, and strengthens nature much in all its actions*. Let a syrup, made with the juice of it and sugar, (as you shall be taught at the latter end of the book,) be kept in every gentlewoman's house, to relieve the weak stomachs and sick bodies of their poor and sickly neighbours; as also the herb kept dry in the house, that so, with other convenient simples, you may make it into an electuary with honey, according as the disease is, and you shall be taught at the latter end of the book. The Arabian physicians have highly extolled the virtues hereof, although the Greeks thought it not worth mentioning. Serapio saith, it causeth the mind and heart to become merry, and reviveth the heart fainting into swoonings, especially of such as are overtaken in their sleep, and driveth away all troublesome cares and thoughts out of the mind arising from melancholy, or black choler; which Avicen also confirmeth. It is very good to help digestion, and open obstructions of the brain; and hath such a

* Pliny, when writing on bawm, informeth us, that, if it be tied to a sword which gave the wound, it instantly stoppeth the blood.

purging quality, saith Avicen, as to expel those melancholy vapours from the spirits and blood which are in the heart and arteries, although it cannot do so in other parts of the body. Dioscorides saith, that the leaves steeped in wine, and the wine drunk, and the leaves externally applied, is a remedy against the sting of scorpions, and the bitings of mad dogs; and commendeth the decoction thereof for women to bathe or sit in, to procure their courses; it is good to wash aching teeth therewith, and profitable for those that have the bloody flux. The leaves also with a little nitre taken in drink, are good against a surfeit of mushrooms, helps the griping pains of the belly, and, being made into an electuary, it is good for them that cannot fetch their breath with ease: used with salt, it takes away wens, kernels, or hard swellings, in the flesh or throat: it cleanseth foul sores, and easeth pains of the gout. It is also good for the liver and spleen. A tanfy or caudle made with eggs, and the juice thereof while it is young, putting to it some sugar and rose water, is good for women in child-bed, when the after-birth is not thoroughly voided, and for their faintings upon or after their fore travail. The herb bruised and boiled in a little wine and oil, and laid warm on a boil, will ripen and break it.

B A R B E R R Y.

THE shrub is so well known to every boy and girl that hath but attained to the age of seven years, that it needs no description.

GOVERNMENT AND VIRTUES: Mars owns the shrub, and presents it to the use of my countrymen, to purge their bodies of choler. The inner rind of the barberry-tree boiled in white wine, and a quarter of a pint drunk each morning, is an excellent remedy to cleanse the body of choleric humours, and free it from such diseases as choler causeth, such as scabs, itch, tetters, ringworms, yellow jaundice, boils, &c. It is excellent for hot agues, burnings, scaldings, heat of blood, heat of the liver, and bloody flux; the berries are as good as the bark, and more pleasing; they get a man a good stomach to his victuals, by strengthening the attractive faculty, which is under Mars. The hair washed with the lye made of the ashes of the tree, and water, will make it turn yellow, viz. Mars's own colour. The fruit and rind of this shrub, the flowers of broom and of heath, or furze, cleanse the body of choler by sympathy, as the flowers, leaves, and bark, of the peach-tree do by antipathy; because these are under Mars, that under Venus.

B A R L E Y.

THE continual usefulness hereof hath made all in general so acquainted with it, that it is altogether needless to describe the several kinds hereof plentifully growing, being yearly sown in this land; the virtues whereof take as followeth.

GOVERNMENT AND VIRTUES. It is a notable plant of Saturn, if you view diligently its effects by sympathy and antipathy, you may easily perceive a reason of them, as also why barley-bread is so unwholesome for melancholy people. Barley in all the parts and compositions thereof, except malt, is more cooling than wheat, and a little cleansing; and all the preparations thereof, as barley-water, and other things made thereof, do give great nourishment to persons troubled with fevers, agues, and heats in the stomach. A poultice made of barley-meal or flour, boiled in vinegar and honey, and a few dry figs put into them, dissolveth all hard imposthumes, and assuageth inflammations, being thereto applied; and, being boiled with melilot and camomile flowers, and some linseed, fenugreek, and rue in powder, and applied warm, it easeth pains in the side and stomach, and windiness of the spleen. The meal of barley and fleawort boiled in water, and made into a poultice with honey and oil of lilies, applied warm, cureth swellings under the ears, throat, neck, and such-like; and a plaister made thereof with tar, wax, and oil, helpeth the king's evil in the throat: boiled with sharp vinegar into a poultice, and laid on hot, it helpeth the leprosy: if boiled in red wine, with pomegranate-rinds and myrtles, it stayeth the lask or other flux of the belly: boiled with vinegar and a quince, it easeth the pains of the gout. Barley-flour, white salt, honey, and vinegar, mingled together, take away the itch speedily and certainly: the water, distilled from the green barley in the end of May, is very good for those that have defluxions of humours fallen into their eyes, and easeth the pains, being dropped into them: or white bread steeped therein, and bound on to the eyes, doth the same.

GARDEN OR SWEET BASIL.

DESCRIPTION. THE greater ordinary basil riseth up usually with one upright stalk, diversly branching forth on all sides, with two leaves at every joint, which, are somewhat broad and round, yet pointed, of a pale green colour, but fresh, a little snipt about the edges, and of a strong heady scent. The flowers are small and white, standing at the tops of the branches, with two small leaves at the joints, in some places green, in others brown, after which come black seed. The root perisheth at the approach of winter, and therefore must be new sown every year.

PLACE. It groweth in gardens only.

TIME. It must be sowed late, and flowers in the heat of the summer, being a very tender plant.

GOVERNMENT AND VIRTUES. With respect to the qualities of this herb, most authors differ; Galen and Dioscorides hold it not fitting to be taken inwardly, as
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does also Cryſſippus, but Pliny and the Arabian phyſicians defend it. For mine own part, I preſently found that ſpeech true, *Non noſtrum inter nos tantas componere lites*; and away to Dr. Reaſon went I, who told me it was an herb of Mars, and under the Scorpion, and perhaps therefore called baſilicon, and then no marvel if it carries a kind of virulent quality with it. Being applied to the place bitten by a venomous beaſt, or ſtung by a waſp or hornet, it ſpeedily draws the poiſon to it. Every like draws its like. Mizaldus affirms, that, if it be laid to rot in horſe-dung, it will breed venomous beaſts; and Hollerius, a French phyſician, affirms upon his own knowledge, that an acquaintance of his, by commonly ſmelling to it, had a ſcorpion bred in his brain. Something is the matter, this herb and rue will not grow together, no, nor near each other: and we know that rue is as great an enemy to poiſon as any that grows. To conclude, it expelleth both birth and after-birth, and, as it helps the deficiency of Venus in one kind, ſo it ſpoils all her actions in another.

B A Y - T R E E.

THIS is ſo well known that it needs no deſcription; I ſhall therefore only write the virtues thereof, which are many.

GOVERNMENT AND VIRTUES. I ſhall but only add a word or two to what my friend hath written, viz. that it is a tree of the Sun, and under the celeftial ſign Leo, and reſiſteth witchcraft very potently, as alſo all the evils old Saturn can do to the body of man, and they are not a few; for, it is the ſpeech of one, and I am miſtaken if it were not Mizaldus, that neither witch nor devil, thunder nor lightning, will hurt a man in the place where a bay-tree is. Galen ſaith, that the leaves or bark do dry and heal very much, and the berries more than the leaves. The bark of the root is leſs ſharp and hot, but more bitter, and hath ſome aſtriction withal, whereby it is effectual to break the ſtone, and good to open obſtructions of the liver, ſpleen, and other inward parts, which bring the dropſy, jaundice, &c. The berries are very effectual againſt the poiſon of venomous creatures, and the ſtings of waſps and bees, as alſo, againſt the peſtilence, or other infectious diſeaſes, and therefore is put into fundry treacles for that purpoſe: they likewise procure women's courſes; and ſeven of them, given to a woman in fore travel of child-birth, do cauſe a ſpeedy delivery, and expel the after-birth, and therefore muſt not be taken but by ſuch as have gone out their time, leſt they procure abortion, or cauſe labour too ſoon: they wonderfully help all cold and rheumatic diſtillations from the brain to the eyes, lungs, or other parts; and, being made into an electuary with honey, do help the conſumption, old coughs, ſhortneſs of breath, and thin rheums; as alſo
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the megrim: they mightily expel wind, and provoke urine; help the mother, and kill worms: the leaves also work the like effects. A bath of the decoction of the leaves and berries, is singularly good for women to sit in, that are troubled with the mother, or the diseases thereof, or the stoppings of their courses, or for the diseases of the bladder, pains in the bowels by wind and stopping of urine. A decoction likewise of equal parts of bay-berries, cummin-seed, hyssop, origanum, and euphorbium, with some honey, and the head bathed therewith, doth wonderfully help distillations and rheums, and setteth the palate of the mouth into its place. The oil made of the berries is very comfortable in all cold griefs of the joints, nerves, arteries, stomach, belly, or womb, and helpeth palsies, convulsions, cramps, aches, trembling, and numbness in every part, also weariness, and pains that come by fore travellings: all grief and pains likewise proceeding from wind, either in the head, stomach, back, belly, or womb, by anointing the parts affected therewith; and pains in the ears are also cured by dropping in some of the oil, or by receiving into the ears the warm fume of the decoction of the berries through a funnel. The oil takes away marks of the skin and flesh by bruises, falls, &c. and dissolveth the congealed blood in them: it helpeth also the itch, scabs, and wheals in the skin.

B E A N S.

BOTH the garden and field beans are so well known, that it saveth me labour of writing any description of them.

GOVERNMENT AND VIRTUES. They are plants of Venus: and the distilled water of the flowers of garden beans is good to cleanse the face and skin from spots and wrinkles, and the meal or flour of them, or the small bean, doth the same. The water distilled from the green husks is held to be very effectual against the stone, and to provoke urine. Bean-flour is used in poultices to assuage inflammations rising upon wounds, and the swellings of women's breasts caused by the curdling of their milk, and represseth their milk. The flour of beans and fenugreek mixed with honey, and applied to felons, boils, bruises, or blue marks by blows, or the imposthumes in the kernels of the ears, helpeth them all: and, with rose-leaves, frankincense, and the white of an egg, being applied to the eyes, helpeth them that are swollen, or do water, or have received any blow upon them, if used with wine. If a bean be parted in two, the skin being taken away, and laid on the place where a leech hath been set that bleedeth too much, it stayeth the bleeding. Bean-flour boiled to a poultice with wine and vinegar, and some oil put thereto, easeth both pain and swelling of the scrotum: the husks boiled in water to a consumption of a

third part thereof, stayeth a lask, and the ashes of the husks, made up with old hog's-grease, helpeth the old pains, contusions, and wounds, of the sinews, the sciatica, and gout. The field-beans have all the aforementioned virtues as the garden-beans. Beans eaten are extreme windy meat, but if, after the Dutch fashion, when they are half boiled, you husk them and stew them, they are wholesomer food.

FRENCH-BEANS.

DESCRIPTION. THE French or kidney bean ariseth up at first but with one stalk, which afterward divideth itself into many arms or branches, but all so weak, that, if they be not sustained with sticks or poles, they will lie fruitless upon the ground; at several places of these branches grow forth long foot-stalks, with every one of them three broad, round, and pointed, green leaves at the end of them, towards the top whereof come forth divers flowers made like unto pease-blossoms, of the same colour for the most part that the fruit will be of, that is to say, white, yellow, red, blackish, or of a deep purple, but white is the most usual; after which come long and slender flatkids, some crooked, some straight, with a string as it were running down the back thereof, wherein are contained flattish round fruit, made to the fashion of a kidney; the root is long, spreadeth with many strings annexed to it, and perisheth every year.

There is also another sort of French-bean commonly growing with us in this land, which is called the scarlet-flowered bean. This ariseth up with sundry branches as the other, but runs up higher to the length of hop-poles, about which they grow twining, but turning contrary to the sun; they have foot-stalks with three leaves on each, as on the other: the flowers also are in fashion like the other, but many more set together, and of a most orient scarlet colour. The beans are larger than the ordinary kind, of a deep purple colour, turning black when it is ripe and dry: the root perisheth also in winter.

GOVERNMENT AND VIRTUES. These also belong to Venus, and, being dried and beaten to powder, are great strengtheners of the kidneys: neither is there a better remedy than it, if taken a drachm at a time in white wine to prevent the stone, or to cleanse the kidneys of gravel or stoppage. The ordinary French-beans are of an easy digestion; they move the belly, provoke urine, enlarge the breast that is straitened with shortness of breath, engender sperm, and incite to venery. And the scarlet coloured beans, on account of the glorious beauty of their colour, being set near a quickset hedge, will greatly adorn the same by climbing up thereon, so that they may be discerned a great way, not without admiration of the beholder at a distance. But they will go near to kill the quicksets by clothing them in scarlet.

LADY'S BED-STRAW.

BESIDES the common name above written, it is called cheefe-rennet, because it performs the same office; as also gallion, pertinugget, and maid's-hair, and by some wild rosemary.

DESCRIPTION. This riseth up with divers small, brown, and square, upright stalks, a yard high, or more, sometimes branched forth into divers parts, full of joints, and with divers very fine small leaves at every one of them, little or nothing rough at all: at the tops of the branches grow many long tufts or branches of yellow flowers, very thick set together, from the several joints, which consist of four leaves each, which smell somewhat strong, but not unpleasant: the seed is small and black like poppy seed, two for the most part joined together; the root is reddish with many small threads fastened unto it, which take strong hold of the ground, and creepeth a little; and the branches, leaning a little down to the ground, take root at the joints thereof, whereby it is easily encreased.

There is also another sort of lady's bed-straw growing frequently in England, which beareth white flowers as the other doth yellow; but the branches of this are so weak, that unless it be sustained by the hedges, or other things near which it groweth, it will lie down on the ground; the leaves are a little bigger than the former, and the flowers are not so plentiful as those; and the root hereof is also thready and abiding.

PLACE. They grow in meadows and pastures, both wet and dry, and by the sides of hedges.

TIME. They flower in May for the most part, and the seed is ripe in July and August.

GOVERNMENT AND VIRTUES. They are both herbs of Venus, and therefore strengthen the parts, both internal and external, which she rules. The decoction of the former of these, being drunk, is good to fret and break the stone, provoke urine, stay inward bleedings, and to heal inward wounds: the herb or flower bruised, and put up into the nostrils, stayeth their bleeding likewise: the flowers and the herb being made into an oil by being set in the sun, and changed after it hath stood ten or twelve days; or into an ointment being boiled in axungia or salad oil with some wax melted therein after it is strained; either the oil made thereof, or the ointment, do help burnings with fire or scalding with water: the same also, or the decoction of the herb and flower, is good to bathe the feet of travellers and lacquais, whose long running causeth weariness and stiffness in their sinews and joints: if the decoction be used warm, and the joints afterwards anointed with the oint-

ointment, it helpeth the dry scab, and the itch in children: and the herb with the white flower is also very good for the sinews, arteries, and joints, to comfort and strengthen them after travel, cold, and pains.

B E E T S.

DESCRIPTION. OF beets there are two sorts, which are best known generally, and whereof I shall principally treat at this time, viz. the white and red beets; and their virtues.

The common white beet hath many great leaves next the ground, somewhat large, and of a whitish green colour; the stalk is great, strong, and ribbed, bearing great store of leaves almost to the very top of it: the flowers grow in very long tufts, small at the ends, and turning down their heads, which are small, pale, greenish, yellow burs, giving cornered prickly seed. The root is great, long, and hard, and, when it hath given seed, is of no use at all.

The common red beet differeth not from the white, but only it is less, and the leaves and the roots are somewhat red: the leaves are differently red, in some only with red strakes or veins, some of a fresh red, and others of a dark red. The root hereof is red, spongy, and not used to be eaten.

GOVERNMENT AND VIRTUES. The government of these two sorts of beets are far different; the red beet being under Saturn, and the white under Jupiter; therefore take the virtues of them apart, each by itself. The white beet doth much loosen the belly, and is of a cleansing digesting quality, and provoketh urine: the juice of it openeth obstructions both of the liver and spleen, and is good for the head ach, and swimings therein, and turnings of the brain; and is effectual also against all venomous creatures; and, applied to the temples, stayeth inflammations in the eyes; it helpeth burnings being used without oil, and, with a little allum put to it, is good for St. Anthony's fire. Beet is hot and dry, and loosens the belly by reason of its nitrosity. It is an errhine, especially the root; for the juice of it received into the nostrils occasions sneezing; the young plants, with their roots, gently boiled and eaten with vinegar, procure an appetite, extinguish thirst, and suppress choler in the stomach. Beet amongst the antients was much noticed for its insipid taste. MARTIAL reproaches it in the following distich,

Ut sapiant fatuæ fabrorum prandia Betæ,

O quam sæpe petet vina piperque coquus?

The juice of this herb drawn up into the nostrils powerfully evacuates phlegmatic humours from the brain, and cures inveterate head-achs. This is counted a great secret by some. It is also good for all wheals, pufes, blisters, and blains, in the skin; the herb

herb boiled, and laid upon chilblains or kibes, helpeth them: the decoction thereof in water and some vinegar, healeth the itch, if bathed therewith, and cleanseth the head of dandriff, scurf, and dry scabs, and doth much good for fretting and running sores, ulcers, and cankers, in the head, legs, or other parts, and is much commended against baldness and shedding of hair.

The red beet is good to stay the bloody flux, women's courses, and the whites, and to help the yellow jaundice. The juice of the root put into the nostrils, purgeth the head, helpeth the noise in the ears, and the tooth-ach; the juice snuffed up the nose helps a stinking breath, if the cause lies in the nose, as many times it doth, if any bruise have been there; as also want of smell coming that way.

W A T E R B E T O N Y.

CALLED also broomwort, and in Yorkshire bishop's leaves:

DESCRIPTION. First, of the water betony, which riseth up with square, hard, greenish, stalks, sometimes brown, set with broad dark green leaves, dented about the edges with notches, somewhat resembling the leaves of the wood betony, but much larger, two for the most part set at a joint; the flowers are many, set at the tops of the stalks and branches, being round-bellied, open at the brims, and divided into two parts, the uppermost being like a hood, and the lowest like a lip hanging down, of a dark red colour, which, pressing away, there come in their places small round heads with small points in the ends, wherein lie small and brownish seeds: the root is a thick bush of strings and threads growing from the head.

PLACE. It groweth by ditch-sides, brooks, and other water-courses, generally through this land, and is seldom found far from the water-sides.

TIME. It flowereth about July, and the seed is ripe in August.

GOVERNMENT AND VIRTUES. Water betony is an herb of Jupiter in Cancer, and is appropriated more to wounds and hurts in the breast than wood betony, which follows. It is an excellent remedy for sick hogs. It is of a cleansing quality; the leaves, bruised and applied, are effectual for all cold and filthy ulcers; and especially if the juice of the leaves be boiled with a little honey, and then dipped therein, and the sores dressed therewith: as also for bruises or hurts, whether inward or outward. The distilled water of the leaves is used for the same purposes; as also to bathe the face or hands spotted or blemished, or discoloured by sun-burning. Pliny saith, that serpents, if they are inclosed or surrounded with this herb, will immediately begin fighting, and kill each other presently.

I confefs I do not much fancy diftill'd waters, I mean fuch waters as are diftill'd cold; fome virtue of the herb they may happen to have, (it were a ftrange thing elfe,) but this I am confident of, that being diftill'd in a pewter ftill, as the vulgar fafhion is, both chemical oil and falt are left behind, unlefs you burn them, and then all is fpoil'd, even the water, which was good for as little as can be by fuch a diftillation.

WOOD-BETONY.

DESCRIPTION. THE common or wood betony hath many leaves rifing from the root, which are fomewhat broad and round at the ends, roundly dented about the edges, ftanding upon long footftalks, from among which rife up fmall, fquare, flender, but yet upright, hairy ftalks, with fome leaves thereon, two apiece at the joints, fmall than the lower, whereon are fet feveral fpik'd heads of flowers like lavender, but thicker and fhorter for the moft part, and of a reddifh or purple colour, fpotted with white fpo'ts both in the upper and lower part: the feeds, being contained within the hufks that hold the flowers, are blackifh, fomewhat long and uneven. The roots are many white thready ftirings; the ftalk perifheth, but the root, with fome leaves thereon, abides all the winter. The whole plant is fomewhat fmall.

PLACE. It groweth frequently in woods, and delighteth in fhady places.

TIME. And it flowereth in July, after which the feed is quickly ripe, yet is in its prime in May.

GOVERNMENT AND VIRTUES. This herb is appropriated to the planet Jupiter, and under the fign Aries. Antonius Mufa, phyfician to the emperor Auguftus Cæfar, wrote a peculiar book on the virtues of this herb; and, amongft other virtues, faith of it, that it preferveth the lives and bodies of men from the danger of epidemical difeafes, and from witchcrafts alfo. It is found by daily experience to be good for many difeafes; it helpeth thofe that loath, or cannot digeft, their meat, thofe that have weak ftomachs, or four belchings, or a continual rifing in their ftomach, uſing it familiarly either green or dry; either the herb or root, or the flowers, drunk in broth or meat, or made into conferve, fyrup, water, elecfuary, or powder, as every one may beft frame themſelves unto, or as the time or feafon requireth: taken any of the aforeſaid ways, it helpeth the jaundice, falling ficknefs, the palfy, convulfions, or fhinking of the finews; the gout, and thofe that are inclined to dropfies; and thofe that have continual pains in their head, although it turns to phrenſy. The powder mix'd with pure honey is no lefs available for all forts of coughs or colds, wheeſing, or ſhortnefs of breath, diftillations of thin rheum upon the lungs, which cauſeth conſumptions. The decoction made with

mead and a little pennyroyal is good for those that are troubled with putrid agues, whether quotidian, tertian, or quartan, and to draw down and evacuate the blood and humours that by falling into the eyes do hinder the sight: the decoction thereof made in wine, and taken, killeth the worms in the belly, openeth obstructions both of the liver and spleen, cureth stitches and pains in the back or side, the torments and griping pains of the bowels, and the wind cholic; and mixed with honey purgeth the belly, helpeth to bring down women's courses, and is of special use for those that are troubled with the falling down of the mother, and pains thereof, and causeth an easy and speedy delivery of women in child-birth; it helpeth also to break and expel the stone either in the bladder or kidneys. The decoction with wine, gargled in the mouth, easeth the tooth-ach; it is commended against the stinging or biting of venomous serpents or mad dogs, being used inwardly and applied outwardly to the place. A drachm of the powder of betony, taken with a little honey in some vinegar, doth wonderfully refresh those that are over-wearied by travel; it stayeth bleeding at the mouth or nose, and helpeth those that piss or spit blood, and those that are bursten or have a rupture, and is good for such as are bruised by any fall or otherwise. The green herb bruised, or the juice applied to any inward hurt, or outward green wound in the head or body, will quickly heal and close it up; as also any veins or sinews that are cut; and will draw forth any broken bone or splinter, thorn, or other thing, gotten into the flesh; it is no less profitable for old sores, or filthy ulcers, yea, though they be fistulous and hollow; but some do advise to put a little salt to this purpose: being applied with a little hog's lard, it helpeth a plague-fore, and other boils and pusses: the fumes of the decoction while it is warm, received by a funnel into the ears, easeth the pains of them, destroyeth the worms, and cureth the running sores in them; the juice dropped into them doth the same. The root of betony is displeasing both to the taste and stomach, whereas the leaves and flowers, by their sweet and spicy taste, are comfortable both in meat and medicine.

These are some of the many virtues Antonius Musa appropriates to betony. It is a very precious herb, that is certain, and very proper to be kept in a man's house, both in syrup, conserve, oil, ointment, and plaster. The flowers are usually conserved.

BEECH - TREE.

IN treating of this tree, you must understand that I mean the great mast beech, which is by way of distinction from that other small rough sort, called in Suffex the small beech, but in Essex hornbeam. I suppose it needless to describe it, being already so well known to my countrymen.

PLACE. It groweth in woods amongst oak and other trees, and in parks, forests, and chafes, to feed deer, and in other places to fatten swine.

TIME. It bloometh in the end of April, or beginning of May for the most part, and the fruit is ripe in September.

GOVERNMENT AND VIRTUES. It is a plant of Saturn, and therefore performs his qualities and properties in these operations: the leaves of the beech-tree are cooling and binding, and therefore good to be applied to hot swellings to disperse them; the nuts do much nourish such beasts that feed thereon. The water that is found in the hollow places of decaying beeches, will cure both man and beast of any scurf, scab, or running tetters, if they be washed therewith. You may boil the leaves into a poultice, or make an ointment of them, when the time of year serves.

B I L B E R R I E S.

THIS herb is also called by some whorts and whortle-berries:

DESCRIPTION. Of these, I shall only speak of two sorts, which are commonly known in England, viz. the black and red bilberries: and first of the black.

This small bush creepeth along upon the ground, scarce rising half a yard high, with divers small dark green leaves set on the green branches, not always one against another, and a little dented about the edges; at the foot of the leaves come forth small, hollow, pale, bluish-coloured, flowers, the brims ending in five points, with a reddish thread in the middle, which pass into small round berries, of the bigness and colour of juniper-berries, but of a purple sweetish sharp taste; the juice of them giveth a purplish colour to their hands and lips that eat and handle them, especially if they break them. The root groweth aslope under ground, shooting forth in sundry places as it creepeth: it loseth its leaves in winter.

The red bilberry or whortle bush riseth up like the former, having sundry harder leaves, like the box-tree leaves, green and round pointed, standing on the several branches; at the tops whereof only, and not from the sides as in the former, come forth divers round flowers, of a pale red colour, after which succeed round, reddish, fappy, berries, which when ripe are of a sharp taste: the root runneth in the ground, as in the former, but the leaves of this abide all the winter.

PLACE. The first groweth in forests, on the heaths, and such-like barren places; the red grows in the northern parts of this land, as Lancashire, Derbyshire, Yorkshire, &c.

TIME. They flower in March and April, and the fruit of the black is ripe in June and July.

GOVERNMENT AND VIRTUES. They are under the dominion of Jupiter. It is a pity they are used no more in phyfic than they are. The black bilberries are good in hot agues, and to cool the heat of the liver and stomach; they do somewhat bind the belly, and stay vomitings and loathings: the juice of the berries made into a syrup, or the pulp made into a conserve with sugar, is good for the purposes aforesaid; as also an old cough, or an ulcer in the lungs, or other diseases therein. The red whorts are more binding, and stop women's courses, spitting of blood, or any other flux of blood or humours, being used as well outwardly as inwardly.

BI - FOIL, or TWAY - BLADE.

DESCRIPTION. THIS small herb, from a root somewhat sweet, shooting downwards many long strings, riseth up a round green stalk, bare or naked next the ground for an inch, two or three to the middle thereof, as it is in age or growth, as also from the middle upwards to the flowers, having only two broad plantane-like leaves, but whiter, set at the middle of the stalk, one against another, and compasseth it round at the bottom of them.

PLACE. It is an usual inhabitant in woods, coppices, and other places in this land.

There is another sort grows in wet grounds and marshes, which is somewhat differing from the former: it is a smaller plant, and greener, having sometimes three leaves; the spike of the flowers is less than the former, and the roots of this do run or creep in the ground.

They are much and often used by many to good purposes, for wounds both green and old, and to consolidate or knit ruptures, being a plant of Saturn.

BIRCH - TREE.

DESCRIPTION. THIS groweth a goodly tall straight tree, fraught with many boughs and branches bending downward, the old ones being covered with a discoloured chapped bark, and the younger being much browner: the leaves at first breaking out are crumpled, and afterward like the beech-leaves, but smaller and greener, and dented about the edges: it beareth small short catkins, somewhat like those of the hazel-nut tree, which abide on the branches a long time, until, grown ripe, they fall on the ground, and their seed with them.

PLACE. It usually grows in woods.

GOVERNMENT AND VIRTUES. It is a tree of Venus; the juice of the leaves while young, or the distilled water of them, or the water that comes out of the tree, be-

ing bored with an augur, and distilled afterwards; any of these, being drunk for some time together, is available to break the stone in the kidneys or bladder, and is good also to wash sore mouths. The leaves of the birch-tree are hot and dry, cleansing, resolving, opening, and bitter; for which reason they are of no small use in a dropsey, the itch, and the like. The bark is bituminous, and is therefore mixed with perfumes that are to correct the air. The fungus of it has an astringent quality, upon which account it stops blood miraculously. This tree, in the beginning of spring, before the leaves come forth, being pierced, yields plentifully a sweet and potent juice, which shepherds, when they are thirsty, often drink in the woods. *TRAGUS*, *HELMONT*, *CHARLETON*, and others, commend the virtues and efficacy of this liquor, and not undeservedly, for the stone in the kidneys and bladder, for bloody urine, and the strangury. This tree begins to yield its juice about the middle of February, and sometimes not till the beginning of March. *Tragus* also commends it for the jaundice. Some wash their faces with it, to take off spots and beautify the skin. *Dr. Needham* cured scorbutic consumptions with it; he used to mix with it good wine and honey. *Renner*, infused in the juice, preserves cheese from worms. The juice of birch cures warts and pimples in the face, if it be washed with it in the day-time, morning and evening, and permitted to dry on.

BIRD'S FOOT.

THIS small herb groweth not above a span high, with many branches spread upon the ground, set with many wings of small leaves; the flowers grow upon the branches, many small ones of a pale yellow colour being set at a head together, which afterwards turn into small jointed cods, well resembling the claws of small birds, whence it took its name.

There is another sort of bird's foot in all things like the former, but a little larger, the flowers of a pale whitish red colour, and the cods distinct by joints like the other, but a little more crooked, and the roots do carry many small white knots or kernels amongst the strings.

PLACE. These grow on heaths, and in many open uncultivated places in this land.

TIME. They flower and seed in the end of summer.

GOVERNMENT AND VIRTUES. They belong to Saturn, and are of a drying binding quality, and thereby very good to be used in wound-drinks, as also to apply outwardly for the same purpose. But the latter bird's foot is found by experience to break the stones in the back or kidneys, and drive them forth, if the decoction thereof be taken; it also wonderfully helpeth the rupture, being taken inwardly, and outwardly applied to the place.

All salts have best operation upon the stone, as ointments and plasters have upon wounds; and therefore you may make a salt of this for the stone: the way to prepare it will be given in plainer terms in the Dispensatory at the latter end of this book.

BISHOP'S W E E D.

BESIDES the common name bishop's weed, it is usually known by the Greek name, ammi, and amios; some call it Æthiopian cummin-feed, and other cummin royal; as also herb William, and bulwort.

DESCRIPTION. Common bishop's weed riseth up with a round stalk, sometimes as high as a man, but usually three or four feet high, beset with divers small, long, and somewhat broad, leaves, cut in some places and dented about the edges, growing one against another, of a dark green colour, having sundry branches on them, and at the top small umbels of white flowers, which turn into small round brown feed, little bigger than parsley-feed, of a quick hot scent and taste. The root is white and stringy, perishing yearly after it hath feeded, and usually riseth again of its own sowing.

PLACE. It groweth wild in many places in England and Wales, as between Greenhythe and Gravefend.

GOVERNMENT AND VIRTUES: It is hot and dry in the third degree, of a bitter taste, and somewhat sharp withal; it provokes lust, (I suppose Venus owns it,) it digesteth humours, provoketh urine and women's courses, expelleth wind, and, being taken in wine, easeth pains and gripings in the bowels, and is good against the bitings of serpents; it is used to good effect in those medicines which are given to hinder the poisonous operation of cantharides upon the passage of the urine: being mixed with honey, and applied to black or blue marks coming of blows or bruises, it takes them away: and, being drunk or outwardly applied, it abateth the high colour of the urine, and makes it pale; and the fumes thereof, taken with rosin or raisins, cleanse the mother.

B I S T O R T.

IT is also called snakeweed, English serpentary, dragon-wort, osterich, and passions.

DESCRIPTION. This hath a thick, short, knobbed, root, blackish without, and somewhat reddish within, a little crooked or turned together, of an harsh astringent taste, with divers black threads hanging thereto, from whence spring up every year divers leaves, standing upon long footstalks, being somewhat broad and long like a dock leaf, and a little pointed at the ends, but that it is of a bluish green colour on the upper side, and of an ash-colour grey somewhat tinged with purple underneath,

neath, with divers veins therein ; from among which rise up divers small and slender stalks, two feet high, and almost naked and without leaves, or with very few, and narrow, bearing a spiky bush of pale flesh coloured flowers, which being past, there abideth small seed, somewhat like sorrel-seed, but larger.

There are other sorts of bistort growing in this land, but smaller in height, root, and stalks, and especially in the leaves. The root is blackish without, and somewhat whitish within, of an austere binding taste, as the former.

PLACE. They grow in shadowy moist woods, and at the foot of hills, but are chiefly nourished up in gardens. The narrow-leaved bistort groweth in the north ; in Lancashire, Yorkshire, and Cumberland.

TIME. They flower about the end of May, and the seed is ripe about the beginning of July.

GOVERNMENT AND VIRTUES. It belongs to Saturn, and is in operation cold and dry. Both the leaves and roots have a powerful faculty to resist all poison : the root in powder taken in drink, expelleth the venom of the plague, the small pox, measles, purples, or any other infectious disease, driving it out by sweating ; the decoction of the root, being drunk in wine, stayeth all manner of inward bleedings or spittings of blood, and any fluxes in the body of either man or woman, or vomiting. It is also very available against ruptures, or burstings, or bruises, or falls, dissolving the congealed blood, and easing the pains that happen thereupon ; it also helpeth the jaundice. The water, distilled from both leaves and root, is a singular remedy to wash any place bitten or stung by any venomous creature ; as also for any of the purposes before spoken of ; and is very good to wash any running sores or ulcers. The decoction of the root in wine, being drunk, hindereth abortion or miscarriage in child-bearing. The leaves also kill the worms in children, and are a great help for them that cannot keep their water ; if the juice of plantane be added thereto, and outwardly applied, it much helpeth the gonorrhea, or running of the reins. A drachm of the powder of the root taken in the water thereof, wherein some red hot iron or steel hath been quenched, is also an admirable help thereto, so as the body be first prepared and purged from the offensive humours. The leaves, seed, or roots, are all very good in decoctions, drinks, or lotions, for inward or outward wounds or other sores ; and the powder, strewed upon any cut or wound in a vein, stayeth the immoderate bleeding thereof ; the decoction of the roots in water, where-to some pomegranate peels and flowers are added, injected into the matrix, stayeth the access of humours to the ulcers thereof, and bringeth it to its right place, being fallen down, and stayeth the immoderate flux of the courses. The root hereof with pellitory of Spain and burnt allum of each a little quantity, beaten small and made
into

into a paste with some honey, and a little piece thereof put into an hollow tooth, or held between the teeth if there be no hollownes in them, stayeth the defluxion of rheum upon them, which causeth pain, and helps to cleanse the head, and void much offensive water. The distilled water is very effectual to wash sores or cancers in the nose, or any other part, if the powder of the root be applied thereunto afterwards. It is good also to fasten the gums, and to take away the heat and inflammations that happen in the jaws, almonds of the throat, or mouth, if the decoction of the leaves, roots, or seeds bruised, or the juice of them be applied; but the roots are most effectual to the purposes aforesaid.

ONE - BLA D E.

DESCRIPTION. THIS small plant never beareth more than one leaf, but only when it riseth up with its stalk, which thereon beareth another, but seldom more, which are of a bluish green colour, broad at the bottom, and pointed with many ribs or veins like plantane; at the top of the stalk grow many small flowers star-fashion, smelling somewhat sweet; after which come small reddish berries when they are ripe. The root is small, of the size of a rush, lying and creeping under the upper crust of the earth, shooting forth in divers places.

PLACE. It grows in moist, shadowy, grassy, places of woods in many parts of this realm.

TIME. It flowereth about May, and the berries are ripe in June; the plant then quickly perisheth until the next year, when it springeth from the same again.

GOVERNMENT AND VIRTUES. It is an herb of the Sun, and therefore cordial. Half a drachm or a drachm at most of the root hereof in powder, taken in wine and vinegar, of each a like quantity, and the party presently laid to sweat, is held to be a sovereign remedy for those that are infected with the plague, and have a sore upon them, by expelling the poison and defending the heart and spirits from danger; it is also accounted a singular good wound herb, and therefore used with other herbs in making such balms as are necessary for the curing of wounds either green or old, and especially if the nerves or sinews are hurt.

B R A M B L E.

IT is also called blackberry-bush, and is so well known that it needs no description; its virtues are as follow:

GOVERNMENT AND VIRTUES. It is a plant of Venus in Aries. You have directions at the latter end of the book for the gathering of all herbs, plants, &c. The reason why Venus is so prickly is because she is in the house of Mars. The buds,

buds, leaves, and branches, while they are green, are of good use in the ulcers and putrid sores of the mouth and throat, and for the quinsy; and likewise to heal other fresh wounds and sores: but the flowers and fruit unripe are very binding; they are also profitable for the bloody flux and lasks, and a fit remedy for spitting of blood. Either the decoction or powder of the root, being taken, is good to break or drive forth gravel, and the stone in the reins and kidneys. The leaves and brambles, as well green as dry, are excellent good lotions for sores in the mouth or secret parts; the decoction of them and of the dried branches doth much bind the belly, and is good for too much flowing of women's courses; the berries or the flowers are a powerful remedy against the poison of the most venomous serpents, as well drunk as outwardly applied, and help the sores of the fundament, and the piles; the juice of the berries, mixed with juice of mulberries, doth bind more effectually, and help fretting and eating sores and ulcers wheresoever. The distilled water of the branches, leaves, flowers, or fruit, is very pleasant in taste, and very effectual in fevers and hot distempers of the body, head, eyes, and other parts, and for all the purposes aforesaid. The leaves boiled in lye, and the head washed therewith, heal the itch, and the running sores thereof, and make the hair black. The powder of the leaves strewed on cancers and running ulcers, doth wonderfully help to heal them. Some condensate the juice of the leaves, and some the juice of the berries, to keep for their use all the year, for the purposes aforesaid.

B L I G H T S.

DESCRIPTION. OF these there are two sorts commonly known, viz. white and red. The white hath leaves somewhat like unto beets, but smaller, rounder, and of a whitish green colour, every one standing upon a small long foot-stalk; the stalk riseth up two or three feet high, with such-like leaves thereon; the flowers grow at the top in long round tufts or clusters, wherein are contained small and round seed: the root is very full of threads or strings.

The red blight is in all things like the white, but that its leaves and tufted heads are exceeding red at the first, and afterwards turn more purple.

There are other kind of blites which grow wild, differing from the two former sorts but little, only the wild are smaller in every part.

PLACE. They grow in gardens, and wild in many places of this land.

TIME. They seed in August and September.

GOVERNMENT AND VIRTUES. They are all of them cooling, drying, and binding, serving to restrain the fluxes of blood in either man or woman, especially the red: which also stayeth the overflowing of women's reds, as the white blight stayeth the

whites in women. It is an excellent secret, you cannot well fail in the use; they are all under the dominion of Venus.

There is another sort of wild blight, somewhat like the other wild kinds, but have long spiked heads of greenish seed, seeming by the thick setting together to be all seed. This sort the fishes are delighted with, and it is a good and useful bait.

BORAGE AND BUGLOSS.

THESE are so well known to be inhabitants of every garden, that I hold it needless to describe them.

To these I may add a third sort, which is not so common, nor yet so well known, and therefore I shall give you its name and description.

NAME. It is called *langue-de-beuf*: but why they should call one herb by the name of bugloss, and another by the name of *langue-de-beuf*, is to me a question, seeing one signifies ox-tongue in Greek, and the other signifies the same in French.

DESCRIPTION. The leaves thereof are smaller than those of bugloss, but much rougher, the stalk rising up about a foot and a half high, and is most commonly of a red colour; the flowers stand in scaly rough heads, being composed of many small yellow flowers, not much unlike to those of the dandelion, and the seed flieeth away in down as that doth; you may easily know the flowers by the taste, for they are very bitter.

PLACE. It groweth wild in many places of the land, and may be plentifully found near London, as between Redriff and Deptford, by the ditch sides; its virtues are held to be the same with borage and bugloss, only this is something hotter.

TIME. They flower in June and July, and the seed is ripe shortly after.

GOVERNMENT AND VIRTUES. They are all three herbs of Jupiter, and under Leo, all great cordials and strengtheners of nature. The leaves or roots are to very good purpose used in putrid and pestilential fevers, to defend the heart, and help to resist and expel the poison or the venom of other creatures; the seed is of like effect; and the seed and leaves are good to encrease milk in women's breasts; the leaves, flowers, and seed, all or any of them, are good to expel pensiveness and melancholy; it helpeth to clarify the blood and mitigate heat in fevers. The juice made into a syrup prevaileth much to all the purposes aforesaid, and is put with other cooling, opening, cleansing, herbs, to open obstructions, and help the yellow jaundice, and, mixed with fumitory, to cool, cleanse, and temper, the blood, whereby it helpeth the itch, ringworms, and tetters, or other spreading scabs or sores. The flowers candied, or made into a conserve, are helpful in the former cases, but are chiefly used as a cordial, and are good for those that are weak with long sickness,

and

and to comfort the heart and spirits of those that are in a consumption, or troubled with often swooning, or passions of the heart; the distilled water is no less effectual to all the purposes aforesaid, and helpeth the redness and inflammations of the eyes, being washed therewith; the dried herb is never used, but the green; yet the ashes thereof boiled in mead, or honey-water, are available against inflammations and ulcers in the mouth or throat, to wash and gargle it therewith. The roots of bugloss are effectual, being made into a licking electuary for the cough, and to condensate thin phlegm, and rheumatic distillations upon the lungs.

BLUE - BOTTLE.

IT is called *syanus*, I suppose from the colour of it; hurt-sickle, because it turns the edge of the sickles that reap the corn; blue-blow, corn-flower, and blue-bottle.

DESCRIPTION. I shall only describe that which is most common, and in my opinion most useful: its leaves spread upon the ground, being of a whitish green colour, somewhat cut on the edges like those of corn-scabious, among which riseth up a stalk divided into divers branches, beset with long leaves of a greenish colour, either but very little indented or not at all; the flowers are of a blue colour, from whence it took its name, consisting of an innumerable company of small flowers, set in a scaly head, not much unlike those of knapweed; the seed is smooth, bright, and shining, wrapped up in a woolly mantle: the root perisheth every year.

PLACE. They grow in corn-fields, amongst all sorts of corn, pease, and beans, but not in tares; if you please to take them up from thence, and transplant them in your garden, especially towards the full of the Moon, they will grow more double than they are, and many times change colour.

TIME. They flower from the beginning of May to the end of harvest.

GOVERNMENT AND VIRTUES. As they are naturally cold, dry, and binding, so are they under the dominion of Saturn. The powder or dried leaves of the blue-bottle or corn-flower is given with good success to those that are bruised by a fall, or have broken a vein inwardly, and void much blood at the mouth; being taken in the water of plantane, horsetail, or the greater comfrey, it is a remedy against the poison of the scorpion, and resisteth all venoms and poisons: the seed or leaves taken in wine is very good against the plague, and all infectious diseases, and is very good in pestilential fevers. The juice put into fresh or green wounds doth quickly close the lips of them together, and is very effectual to heal all ulcers and sores in the mouth; the juice dropped into the eyes taketh away the heat and inflammation in them; the distilled water of the herb hath the same properties, and may be used for the effects aforesaid.

BRANK - URSINE.

BESIDES the common name brank-ursine, it is also called bear's breech, and acanthus, though I think our English names more proper, for the Greek word acanthos signifies any thistle whatsoever.

DESCRIPTION. This thistle shoots forth very many large, thick, sad green, smooth, leaves upon the ground, with a very thick and juicy middle rib; the leaves are parted with sundry deep gashes on the edge; the leaves remain a long time before any stalk appears; afterwards riseth up a reasonably big stalk three or four feet high, and finely decked with flowers from the middle of the stalk upwards, for on the lower part of the stalk there is neither branch nor leaf; the flowers are hooded and gaping, being white in colour, and standing in brownish husks with a small, long, undivided, leaf under each leaf; they seldom seed in our country; its roots are many great, and thick, blackish without and whitish within, full of a clammy sap; if you set a piece of them in a garden, defending it from the first winter's cold, it will grow and flourish.

PLACE. They are only nursed up in gardens in England, where they will grow very well.

TIME. It flowereth in June and July.

GOVERNMENT AND VIRTUES. It is an excellent plant under the dominion of the Moon: I could wish such as are studious would labour to keep it in their gardens. Its leaves being boiled, and used in clysters, are exceeding good to mollify the belly, and make the passages slippery; the decoction, drunk, is excellent good for the bloody flux; the leaves being bruised and rather boiled, and applied like a poultice, are exceeding good to unite broken bones, and strengthen joints that have been put out; the decoction of either the leaves or roots being drunk, and the decocted leaves applied to the place, is excellent good for the king's evil that is broken and runneth, for by the influence of the Moon it reviveth the ends of the veins which are relaxed; there is scarcely a better remedy to be applied to such places as are burnt with fire than this is, for it fetcheth out the fire, and heals it without a scar; it is also an excellent remedy for such as are bursten, being either taken inwardly or applied to the place; in like manner used, it helps the cramp and the gout; it is excellent good in hectic fevers, and restores radical moisture to such as are in consumptions.

BRIONY.

IT is called wild-vine, wood-vine, tamus, and our lady's seal; the white is called white-vine by some, and the black black-vine.

DESCRIP-

DESCRIPTION. The common white briony groweth ramping upon the hedges, sending forth many long, rough, very tender, branches at the beginning, with many very rough broad leaves thereon, cut for the most part into five partitions, in form very like a vine leaf, but smaller, rougher, and of a whitish or hoary green colour, spreading very far, and twining with its small clasps, that come forth at the joints with the leaves, very fast on whatsoever standeth next to it; at the several joints also, especially toward the tops of the branches, cometh forth a long stalk bearing many whitish flowers, together in a long tuft, consisting of small branches each, laid open like a star; after which come the berries, separated one from another more than a cluster of grapes, green at the first, and very red when they are thoroughly ripe; of no good scent, and of a most loathsome taste, provoking vomit: the root groweth to be exceeding great, with many long twines or branches growing from it, of a pale whitish colour on the outside, and more white within, and of a sharp, bitter, loathsome, taste.

PLACE. It groweth on banks, or under hedges, through this land, and the roots lie very deep.

TIME. It flowereth in July and August, some earlier and some later than other.

GOVERNMENT AND VIRTUES. They are furious martial plants: the roots of briony purge the belly with great violence, troubling the stomach and burning the liver, and therefore not rashly to be taken; but, being corrected, are very profitable for the diseases of the head, as falling sickness, giddiness, and swimnings, by drawing away much phlegm and rheumatic humours that oppress the head, as also the joints and sinews, and therefore good for palsies, convulsions, cramps and stiches in the side, and the dropsy; and, in provoking urine, they cleanse the reins and kidneys from the gravel and stone, by opening the obstructions of the spleen, and consuming the hardness and swellings thereof. If the juice be tempered with the meal of vetches or fenugreek, or boiled in oil till it be consumed, it will take away black or blue spots, and Galen affirmeth it is a plant profitable for tanners to thicken their leather hides with. The root spread upon a piece of sheep's leather, in the manner of a plaister, while it is fresh and green, takes away black or blue marks, and all scars and deformities of the skin; it breaks hard apothumes, draws forth splinters and broken bones, dissolves congealed blood, and, being laid on and used upon the hip, or huckle-bone, shoulders, arms, or any other part where there is great pain, it takes it away in a short space, and works very effectually. The decoction of the root in wine, drunk once a week at going to bed, cleanseth the mother, and helpeth the rising thereof, expelleth the dead child for fear of abortion; a drachm of the root in power taken in white wine, bringeth down their courses; an electuary, made of the roots

and honey, doth mightily cleanse the chest of rotten phlegm, and wonderfully helpeth an old strong cough, those that are troubled with shortness of breath, and is very good for them that are bruised inwardly, to help to expel the clotted or congealed blood: the leaves, fruit, and root, do cleanse old and filthy sores, are good against all fretting and running cankers, gangrenes, and tetters, and therefore the berries are by some country people called tetter-berries. The root cleanseth the skin wonderfully from all black and blue spots, freckles, morphew, leprosy, foul scars, or other deformity whatsoever; as also all running scabs and manginess are healed by the powder of the dried root, or the juice thereof, but especially by the fine white hardened juice: the distilled water of the roots worketh the same effects, but more weakly: the root bruised, and applied of itself to any place where the bones are broken, helpeth to draw them forth, as also splinters and thorns in the flesh; and, being applied with a little wine mixed therewith, it breaketh boils, and helpeth whitlows on the joints.

For all these latter complaints, that is to say, sores, cankers, &c. apply it outwardly, and take my advice along with you; you shall find in the Dispensatory, among the preparations at the latter end, a medicine called *fæcula brionie*; take that and use it, (you have the way there how to make it,) and mix it with a little hog's grease, or other convenient ointment, and use it at your need.

As for the former diseases, where it must be taken inwardly, it purgeth very violently, and needs an abler hand to correct it than most country people have, therefore it is a better way for them, in my opinion, to let the simple alone, and take the compound water of it, mentioned in my dispensatory, and that is far more safe, being wisely corrected.

B R O O K - L I M E.

IT is also called water pimpernel.

DESCRIPTION. It riseth forth from a creeping root, that shooteth forth strings at every joint as it runneth, divers and sundry green stalks, round and sappy, with some branches on them, somewhat broad, round, deep, green, and thick, leaves set by couples thereon; from the bosom whereof shoot forth long footstalks, with sundry small blue flowers on them, that consist of five small round pointed leaves each.

There is another sort nothing differing from the former, but that it is greater, and the flowers of a paler blue colour.

PLACE. They sometimes grow in small standing waters, but generally near water-creffes.

TIME. And flower in June and July, giving seed the month after.

GOVERNMENT AND VIRTUES. It is a hot and biting martial plant: brooklime and water-creffes are generally used together in diet drinks, with other things, serving to purge the blood and body from ill humours that would destroy health, and are helpful for the scurvy: they do also provoke urine, and help to break the stone and pass it away; they provoke women's courses, and expel the dead child. Being fried with butter and vinegar, and applied warm, it helpeth all manner of tumours, swellings, and inflammations.

Such drinks ought to be made of sundry herbs according to the malady offending. I shall give a plain and easy rule for that purpose at the latter end of this book.

BUTCHER'S BROOM.

IT is called rufcus and bruscus, knee-holm, knee-holly, knee-hulver, and pettigree.

DESCRIPTION. The first shoots that sprout from the root of butcher's broom are thick, whitish, and short, somewhat like those of asparagus, but greater; they, rising up to be a foot and a half high, are spread into divers branches, green and somewhat crested with the roundness, tough and flexible, whereon are set somewhat broad and almost round hard leaves, and prickly pointed at the ends, of a dark green colour, two for the most part set at a place, very close or near together; about the middle of the leaf, on the back and lower side from the middle rib, breaketh forth a small whitish green flower, consisting of four small round pointed leaves, standing upon little or no footstalk, and in the place whereof cometh a small round berry, green at the first; and red when it is ripe, wherein are two or three white, hard, round, seeds contained; the root is thick, white, and great at the head, and from thence sendeth forth divers thick, white, long, tough, strings.

PLACE. It groweth in coppices, and on heaths and waste grounds, and oftentimes under or near the holly-bushes.

TIME. It shooteth forth its young buds in the spring, and the berries are ripe in or about September; the branches or leaves abiding green all the winter.

GOVERNMENT AND VIRTUES. It is a plant of Mars, being of a gallant cleansing and opening quality; the decoction of the roots, made with wine, openeth obstructions, provoketh urine, helpeth to expel gravel, and the stone, the stranguary, and womens' courses, as also the yellow jaundice, and the head-ach; and, with some honey or sugar put therein, cleanseth the breast of phlegm, and the chest of much clammy humours gathered therein; the decoctions of the root drunk, and a poultice made of the berries and leaves being applied, are effectual in knitting and consolidating broken bones, or parts out of joint. The common way of using it, is to boil
the

the roots of it and parsley, and fennel, and smallage, in white wine, and drink the decoction, adding the like quantity of grasse-roots to them: the more of the roots you boil, the stronger will the decoction be; it works no ill effects, yet I hope you have wit enough to give the strongest decoction to the strongest bodies.

BROOM AND BROOM-RAPE.

TO spend time in writing a description hereof is altogether needless, it being so generally used by all the good housewives almost through this land to sweep their houses with, and therefore very well known to all sorts of people.

The broom-rape springeth up on many places from the roots of the broom, but more often in fields, or by hedge-sides, and on heaths. The stalk thereof is of the bigness of a finger or thumb, above two feet high, having a show of leaves on them, and many flowers at the top, of a deadish yellow colour, as also the stalks and leaves are.

PLACE. They grow in many places of this land commonly, and as commonly spoil all the land they grow in.

TIME. They flower in the summer-months, and give their seed before winter.

GOVERNMENT AND VIRTUES. The juice or decoction of the young branches or seed, or the powder of the seed taken in drink, purgeth downwards and draweth phlegmatic and watery humours from the joints, whereby it helpeth the dropsy, gout, sciatica, and pains in the hips and joints: it also provoketh strong vomits, and helpeth the pains of the sides, and swellings of the spleen; cleanseth also the reins, or kidneys and bladder of the stone, provoketh urine abundantly, and hindereth the growing again of the stone in the body. The continual use of the powder of the leaves and seed doth cure the black jaundice: the distilled water of the flowers is profitable for all the same purposes: it also helpeth surfeits, and altereth the fits of agues, if three or four ounces thereof, with as much of the water of the smaller centaury, and a little sugar put therein, be taken a little before the fit cometh, and the party be laid down to sweat in bed. The oil or water, that is drawn from the ends of the green sticks heated in the fire, helps the tooth-ach, The juice of the young branches made into an ointment of old hog's grease and anointed, or the young branches bruised and heated in oil or hog's grease, and laid to the sides pained by wind, as in stitches, or the spleen, easeth them in once or twice using; the same, boiled in oil, is the safest and surest medicine to kill lice in the head or body; and is an especial remedy for joint-achs and swollen knees that come by the falling down of humours.

The broom-rape also is not without its virtues. The decoction thereof in wine is thought to be as effectual to avoid the stone in the kidneys and bladder, and to provoke urine, as the broom itself. The juice thereof is a singular good help to cure as well green wounds as old and filthy sores and malignant ulcers; the insolate oil, wherein there has been three or four repetitions of infusion of the top stalks with the flowers strained and cleared, cleanseth the skin from all manner of spots, marks, and freckles, that arise either by the heat of the sun or the malignity of humours. As for the broom and broom-rape, Mars owns them; and it is exceeding prejudicial to the liver, I suppose by reason of the antipathy between Jupiter and Mars: therefore, if the liver be disaffected, administer none of it.

BUCKSHORN PLANTANE.

DESCRIPTION. THIS, being sown of seed, riseth up at the first with small, long, narrow, hairy, dark-green, leaves, like grass, without any division or gash in them; but those that follow are gashed in on both sides the leaves into three or four gashes, and pointed at the ends, resembling the knags of a buck's horn, whereof it took its name; and being well grown round about the root upon the ground, in order one by another, thereby resembling the form of a star, from among which rise up divers hairy stalks, about a hand-breadth high, bearing every one a small, long, spiky, head, like to those of the common plantane, having such-like bloomings and seed after them: the root is single, long, small, and stringy.

PLACE. They grow in dry sandy ground, as in Tothill-fields, Westminster, and many other places in this kingdom.

TIME. They flower and seed in May, June, and July; and their leaves, in a manner, abide green all the winter.

GOVERNMENT AND VIRTUES. It is under the dominion of Saturn, and is of a drying and binding quality: this, boiled in wine and drunk, and some of the leaves applied to the hurt place, is an excellent remedy for the biting of the viper or adder, which I take to be one and the same; the same, being also drunk, helpeth those that are troubled with the stone in the reins or kidneys, by cooling the heat of the parts affected, and strengthening them; as also weak stomachs that cannot retain, but cast up, their meat; it stayeth bleedings at the mouth and nose, bloody urine, or the bloody flux, and stoppeth the lask of the belly and bowels: the leaves hereof bruised, and laid to their sides that have an ague, suddenly ease the fit; and the leaves and roots beaten with some bay-salt, and applied to the wrists, work the same effects; the herb boiled in ale or wine, and given for some mornings and evenings together, stayeth the distillations of hot and sharp rheums falling into the eyes from the head, and helpeth all sorts of sore eyes.

BUCKSHORN.

IT is also called hartshorn, herbastella and herbastellaria, sanguinaria, herb-ivy, herb-ivy, wort-creffes, and swine-creffes.

DESCRIPTION. It has many small and weak straggling branches trailing here and there upon the ground; the leaves are many, small, and jagged, not much unlike to those of buckshorn plantane, but much smaller, and not so hairy: the flowers grow among the leaves in small, rough, whitish, clusters; the seeds are smaller and brownish, and of a bitter taste.

PLACE. They grow in dry, barren, sandy, grounds.

TIME. They flower and seed with the other plantanes.

GOVERNMENT AND VIRTUES. This is also under the dominion of Saturn: the virtues are held to be the same as buckshorn plantane, and therefore by all authors it is joined with it: the leaves, being bruised, and applied to warts, will make them consume and waste away in a short time.

BUGLE.

BESIDES the name bugle, it is called middle-confound, and middle-comfrey, brown-bugle, and by some ficklewort and herb-carpenter, though in Suffex they call another herb by that name.

DESCRIPTION. This hath larger leaves than those of the self-heal, but else of the same fashion, or rather a little longer; in some green on the upper side, and in others rather brownish, dented about the edges, somewhat hairy, as the square stalk is also, which riseth up to be half a yard high sometimes, with the leaves set by couples; from the middle almost whereof upwards stand the flowers together, with many smaller and browner leaves than the rest on the stalk below, set at distances, and the stalk bare between them; among which flowers are also small ones, of a bluish, and sometimes of an ash, colour, fashioned like the flowers of the ground-ivy, after which come small, round, blackish, seed: the root is composed of many strings, and spreadeth upon the ground.

The white bugle differeth not in form or greatness from the former, saving that the leaves and stalks are always green, and the flowers are white.

PLACE. It grows in woods, coppices, and fields, generally throughout England, but the white-flowered bugle is not so plentiful as the other.

TIME. They flower from May till July, and in the mean time perfect their seed: the root, and the leaves next the ground, abiding all the winter.

GOVERNMENT AND VIRTUES. This herb is belonging to Venus: if the virtues of it make you in love with it, (as they will if you are wise,) keep a syrup of it to

take inwardly, and an ointment and plaſter of it to uſe outwardly, always by you. The decoction of the leaves and flowers, made in wine, and taken, diſſolveth the congealed blood in thoſe that are bruifed inwardly by a fall or otherwiſe, and is very effectual for any inward wounds, thruſts, or ſtabs, in the body or bowels, and is a ſpecial help in all wound-drinks, and for thoſe that are liver-grown as they call it. It is wonderful in curing all manner of ulcers and ſores, whether new and freſh or old and inveterate, and even gangrenes and fiſtulas, if the leaves are bruifed and applied, or the juice uſed to waſh and bathe the places; and the ſame, made into a lotion with ſome honey and allum, cureth all ſores of the mouth or gums, be they never ſo foul, or of long continuance; and worketh no leſs powerfully and effectually for ſuch ulcers and ſores as happen in the ſecret parts of men or women. Being alſo taken inwardly, or outwardly applied, it helpeth thoſe that have broken any bone, or have any member out of joint. An ointment, made with the leaves of bugle, ſcabious, and ſanicle, bruifed, and boiled in hog's greaſe until the herbs be dry, and then ſtrained forth into a pot, for ſuch occaſions as ſhall require it, is ſo ſingularly good for all ſorts of hurts in the body, that none who know its uſefulneſs will be without it. The truth is, I have known this herb cure ſome diſeaſes of Saturn, of which I have thought good to quote one. Many times ſuch as give themſelves much to drinking are troubled with ſtrange fancies and fights in the night-time, and ſome with voices, as alſo with the diſeaſe *ephalies*, or the mare: I take the reaſon of this to be, according to FERNELIUS, a melancholy vapour, made thin by exceſſive drinking ſtrong liquor, which flies up and diſturbs the fancy, and breeds imagination like itſelf, i. e. fearful and troubleſome. Theſe I have known cured by taking only two ſpoonfuls of the ſyrup of this herb about two hours after ſupper, when you go to bed: but whether this is done by ſympathy or antipathy is rather doubtful; all that know any thing in aſtrology know that there is a great antipathy between Saturn and Venus in matters of procreation, yea, ſuch a one, that the barrenneſs of Saturn can be removed by none but Venus, nor the luſt of Venus be repelled by any but Saturn; but I am not yet of opinion it is done this way; my reaſon is, becauſe theſe vapours, though in quality melancholy, yet by their flying upward ſeem to be ſomething aerial; therefore I rather think it is done by ſympathy, Saturn being exalted in Libra, the houſe of Venus.

B U R N E T.

IT is alſo called ſanguiforba, pimpinella, bipenula, ſolbegrella, &c. Common garden burnet is ſo well known that it needeth no deſcription; but there is another fort which is wild, the deſcription whereof take as followeth,

DESCRIP-

DESCRIPTION. The great wild burnet hath winged leaves rising from the roots like the garden burnet, but not so many; yet each of these leaves are at least twice as large as the other, and nicked in the same manner about the edges, of a greyish colour on the under side; the stalks are larger and rise higher, with many such-like leaves set thereon, and greater heads at the tops, of a brownish green colour; and out of them come small, dark, purple, flowers, like the former, but larger: the root is black and long like the other, but also greater; it hath almost neither scent nor taste therein like the garden kind.

PLACE. The first grows frequently in gardens; the wild kind groweth in divers counties of this kingdom, especially in Huntington and Northamptonshires in the meadows there; as also near London by Pancras church, and by a causeway-side in the middle of a field by Paddington.

TIME. They flower about the end of June and beginning of July, and their seed is ripe in August.

GOVERNMENT AND VIRTUES. It is an herb the Sun challengeth dominion over, and is a most precious herb, little inferior to betony; the continual use of it preserves the body in health, and the spirits in vigour; for, if the Sun be the preserver of life under God, his herbs are the best in the world to do it by. They are accounted to be both of one property, but the smaller is the most effectual, because quicker and more aromatical; it is a friend to the heart, liver, and other principal parts of a man's body: two or three of the stalks with leaves put into a cup of wine, especially claret, are known to quicken the spirits, refresh and cheer the heart, and drive away melancholy; it is a special help to defend the heart from noisome vapours, and from infection of the pestilence, the juice thereof being taken in some drink, and the party laid to sweat immediately. They have also a drying and an astringent quality, whereby they are available in all manner of fluxes of blood or humours, to staunch bleedings inward or outward; lasks, scourings, the bloody flux, women's too-abundant courses, the whites, and the cholerick belchings and castings of the stomach; and is a singularly good herb for all sorts of wounds both of the head and body, either inward or outward; for all old ulcers, or running cankers, and moist sores; to be used either by the juice or the decoction of the herb, or by the powder of the herb or root, or the water of the distilled herb, or ointment by itself, or with other things to be kept. The seed is also no less effectual both to stop fluxes and dry up moist sores, being taken in powder inwardly in wine or steamed water, that is, wherein hot gads of steel have been quenched; or the powder of the seed mixed with the ointments.

BUT-

B U T T E R - B U R .

THIS herb is also called petafitis.

DESCRIPTION. It riseth up in February, with a thick stalk about a foot high, whereon are set a few small leaves, or rather pieces, and at the tops a long spiked head of flowers, of a bluish or deep red colour, according to the soil wherein it groweth; and, before the stalk with the flowers have been a month above ground, they will be withered and gone, and blown away with the wind, and the leaves will begin to spring, which being full grown are very large and broad, being somewhat thin and almost round, whose thick red footstalks, about a foot long, stand towards the middle of the leaves; the lower part being divided into two round parts, close almost one to another, of a pale green colour, and hoary underneath: the root is long and spreading under the ground, being in some places no bigger than one's finger, in others larger, rather blackish on the outside and white within, and of a very bitter and unpleasant taste.

PLACE AND TIME. They grow in low and wet grounds by rivers and waterfides; their flowers (as is said) rising and decaying in February and March, before the leaves, which appear in April.

GOVERNMENT AND VIRTUES. It is under the dominion of the Sun, and therefore is a great strengthener of the heart, and cheers the vital spirits. The excellent FUCHSIUS, in his account of this herb, is most express, and records its virtues as wonderful in pestilential fevers; and this he speaks not from tradition, but his own experience. Were it needful to prove the sun gives light, it is scarce less certain, or less obvious, than that this root, beyond all things else, cures pestilential fevers. Its roots are by long experience found to be very available against the plague and pestilential fevers, by provoking sweat; if the powder thereof be taken in wine, it also resisteth the force of any other poison: the root taken with zedoary and angelica, or without them, helps the rising of the mother; the decoction of the root in wine, is singular good for those that wheeze much, or are short-winded; it provoketh urine also and women's courses, and killeth flat and broad worms in the belly; the powder of the root doth wonderfully help to dry up the moisture of sores that are hard to be cured, and taketh away all spots and blemishes of the skin.

B U R D O C K .

THEY are also called personata, bardona, lappa major, great burdock, and clotbur. It is so well known, even to the little boys who pull off the burs to throw and stick on each other, that I shall omit writing any description of it.

PLACE. It grows plentifully by ditches and water-sides, and by the highways, almost every where throughout this land.

GOVERNMENT AND VIRTUES. Venus challengeth this herb for her own; and, by its seed or leaf, you may draw the womb which way you please, either upward by applying it to the crown of the head, in case it falls out, or downward in fits of the mother, by applying it to the soles of the feet; or, if you would stay it in its place, apply it to the navel, and that is likewise a good way to stay the child in it: the bur-leaves are cooling, moderately drying, and discussing withal, whereby they are good for old ulcers and sores. A drachm of the roots, taken with pine-kernels, helpeth them that spit foul, mattery, and bloody, phlegm; the leaves, applied to the places troubled with the shrinking of the sinews or arteries, give much ease: the juice of the leaves, or rather the roots themselves, given to drink with old wine, doth wonderfully help the bitings of serpents; and the root beaten with a little salt, and laid on the place, suddenly easeth the pain thereof, and helpeth those that are bit by a mad dog: the juice of the leaves, taken with honey, provoketh urine, and remedieth the pain of the bladder: the seed, being drunk in wine forty days together, doth wonderfully help the sciatica: the leaves bruised with the white of an egg, and applied to any place burnt with fire, take out the fire, give sudden ease, and heal it up afterwards. The decoction of them, fomented on any fretting sore or canker, stayeth the corroding quality, which must be afterwards anointed with an ointment made of the same liquor, hog's grease, nitre, and vinegar, boiled together. Its roots may be preserved with fugar, and taken fasting, or at other times, for the said purposes, and for consumptions, the stone, and the lask: the seed is much commended to break the stone, and causes it to be expelled by urine, and is often used with other seeds, and things to that purpose.

B U C K - W H E A T.

NAMES. IN most counties of England this grain goeth by the general name of French wheat, as in Hampshire, Surry, Berkshire, Wiltshire, and Buckinghamshire, and especially in those barren parts of the counties where it is most usually sown and delighteth to grow; it is also in many parts of England called buck-wheat: some take it to be the *erysimum* of THEOPHRASTUS, and the *ireo* of PLINY, and it is called by MATHIOLUS *frumentum farasenicum*; the Dutch names are *bockweydt* and *bukenweydt*.

DESCRIPTION. It riseth up with divers round hollow reddish stalks, set with divers leaves, each by itself on a stalk, which is broad and round, and lies forked at the bottom, small and pointed at the end, somewhat resembling an ivy-leaf, but that it is softer

softer in handling; at the top of the stalks come forth divers clusters of small white flowers, which turn into small three-cornered blackish seed, with a white pulp therein: the root is small and thready.

PLACE AND TIME. It is said to have its original birth-place in Arabia, whereby it had the Latin name *frumentum sarsenicum*, and was transplanted from thence into Italy, but now is very commonly sown in most of our northern counties, where, for the use and profit made of it, many fields are sown therewith. It is not usually sown before April, and sometimes in May, for at its first springing up a frosty night kills it all, and so it will do the flowers when it blossoms; it is ripe at the latter end of August, or the beginning of September, and will grow in a dry hungry ground, for which it is held as good as a dunging.

GOVERNMENT AND VIRTUES. This grain is attributed to Venus; it doth nourish less than wheat, rye, or barley, but more than millet or panic, and the bread or cakes made of the meal thereof doth easily digest, and soon pass out of the stomach, though some hold to the contrary; it giveth small nourishment, though not bad, and is withal a little flatulent or windy, yet country people in divers parts of Germany and Italy do feed hereon as almost their only bread-corn, and are strong and lusty persons, following hard labour; the bread or cakes made thereof, are pleasant, but do somewhat press or lie heavy on the stomach. I never knew any bread or cakes made of it for people to eat in this country, but it is generally used to fatten hogs, and poultry of all sorts, which it doth very exceedingly and quickly. The physical uses of it are these: it provoketh urine, increaseth milk, looseth the belly, and, being taken in wine, is good for melancholy persons; the juice of the leaves, dropped into the eyes, cleareth the sight.

BLACK BIND - WEED.

NAME. IT is also called with-wind.

DESCRIPTION. Black bind-weed hath smooth red branches, very small, like great threads, wherewith it wrappeth and windeth itself about trees, hedges, flakes, and very thing it can lay hold upon; the leaves are like to ivy, but smaller and more tender; the flowers are white, and very small; the seed is black, triangular or three square, growing thick together; every seed is inclosed and covered with a thin skin; the root is small and tender as a thread.

PLACE. It groweth in borders of fields and gardens, about hedges and ditches, and amongst herbs.

TIME. It delivereth its seed in August and September, and afterwards perissheth.

GOVERNMENT AND VIRTUES. Bind-weed is a plant of Mercury, of a hot nature, and of subtil parts, having power to dissolve; the juice of the leaves, being drunk, doth loosen and open the belly; and, being pounded, and laid to the grieved place, dissolveth, wasteth, and consumeth, hard swellings.

BALSAM-TREE.

THE Arabians call it *baleffan*, the Greeks βαλσαμιν, and the Latins *balsamum*; the liquor they call *opobalsamum*, the berries or fruit of the tree *carpobalsamum*, and the sprigs or young branches thereof *xylobalsamum*.

DESCRIPTION. The balsam or balm-tree, in the most natural places where it groweth, is never very large, seldom more than eight or nine feet high, and in some places much lower, with divers small and straight slender branches issuing from them, of a brownish red colour, especially the younger twigs, covered with a double bark, the red first and a green one under it, which are of a very fragrant smell, and of an aromatical quick taste, somewhat astringent and gummy, cleaving to the fingers; the wood under the bark is white, and as insipid as any other wood; on these branches come forth, sparsedly and without order, many stalks of winged leaves, somewhat like unto those of the mastic-tree, the lowest and those that first come forth consisting but of three leaves, others of five or seven leaves, but seldom more, which are set by couples, the lowest smallest, and the next bigger, and the uppermost largest of all; of a pale green colour, smelling and tasting somewhat like the bark of the branches, somewhat clammy also, and abide on the bushes all the year; the flowers are many and small, standing by three together on small stalks at the ends of the branches, made of six small white leaves a-piece, after which follow small brownish hard berries, little bigger than juniper-berries, small at both ends, crested on the sides, and very like unto the berries of the turpentine-tree, of a very sharp scent, having a yellow honey-like substance in them, somewhat bitter, but aromatical in taste, and biting on the tongue like the *opobalsamum*; from the body hereof, being cut, there issueth forth a liquor (which sometimes floweth without scarifying) of a thick whitish colour at the first, but afterwards groweth oily, and is somewhat thicker than oil in summer, and of so sharp a scent that it will pierce the nostrils of those that smell thereto; it is almost like unto oil of spike, but, as it groweth older, so it groweth thicker, and not so quick in the smell, and in colour becoming yellow like honey or brown thick turpentine as it groweth old.

PLACE AND TIME. The most reputed natural places where this tree hath been known to grow, both in these and former days, are Arabia Fælix, about Mecca and Medina, and a small village near them called Bedrumia, and the hills, valleys,
and

and sandy grounds, about them, and the country of the Sabeans adjoining next thereunto; and from thence transplanted into India and Egypt: it likewise grew on the hills of Gilead. It is reported, that the Queen of Sheba brought of the balsam-trees to Solomon, as the richest of her presents, who caused them to be planted in orchards, in the valley of Jericho, where they flourished, and were tended and yearly pruned, until they, together with the vineyards in that country, were destroyed by that monster of mankind, the savage beaftial Turk. It flowereth in the spring, and the fruit is ripe in autumn.

GOVERNMENT AND VIRTUES. This balsam-tree is a solar plant, of temperature hot and dry in the second degree, and is sweet in smell, being of thin parts, but the liquor or *opobalsamum* is of more thin parts than the plant itself; the fruit or berries is very like it in quality, but far inferior thereunto in the subtilty: the liquor or *opobalsamum* is of good use against the poisons or infections of vipers, serpents, and scorpions, the pestilence and spotted fever, and other putrid and intermissive agues that arise from obstructions, and crude cold humours, to take a scruple or two in drink, for some days together, and to sweat thereon; for this openeth the obstructions of the liver and spleen, and digesteth those raw humours in them, cherishing the vital spirits, radical moisture, and natural heat, in them, and is very effectual in cold griefs and diseases of the head or stomach, helping the swimings and turnings of the brain, weak memories, and falling sickness; it cleareth the eyes of films or skins, and easeth pains in the ears: it helpeth a cough, shortness of breath, and consumption of the lungs, warming and drying up the distillations of rheums upon them, and all other diseases of the stomach proceeding of cold or wind; the cold or windy distempers of the bowels, womb, or mother, which cause torments, or pains, or the cold moistures procuring barrenness. It provoketh the courses, expelleth the dead and after-births, cures the flux of the whites and stopping of urine; it cleanseth the reins and kidneys, and expelleth the stone and gravel; it is very good against the palsy, cramp, tremblings, convulsions, shrinking of the sinews, and green wounds.

CABBAGES AND COLEWORTS.

I SHALL spare a labour in writing a description of these, since almost every one that can but write at all may describe them from his own knowledge, they being generally so well known that descriptions are altogether needless.

PLACE. These are generally planted in gardens.

TIME. Their flowering-time is towards the middle or end of July, and the seed is ripe in August.

GOVERNMENT AND VIRTUES. The cabbages or coleworts boiled gently in broth, and eaten, do open the body, but the second decoction doth bind the body: the juice thereof drunk in wine, helpeth those that are bitten by an adder; and the decoction of the flowers bringeth down women's courses. Being taken with honey, it recovereth hoarseness or loss of voice; the often eating of them, well boiled, helpeth those that are entering into a consumption: the pulp of the middle ribs of colewort, boiled in almond-milk, and made up into an electuary with honey, being taken often, is very profitable for those that are purisy or short-winded; being boiled twice, and an old cock boiled in the broth, and drunk, helpeth the pains and obstructions of the liver and spleen, and the stone in the kidneys; the juice boiled with honey, and dropped into the corner of the eyes, cleareth the sight by consuming any film or cloud beginning to dim it; it also consumeth the canker growing therein. They are much commended being eaten before meat to keep one from surfeiting, as also from being drunk with too much wine, and quickly make a drunken man sober; for, as they say, there is such an antipathy or enmity between the vine and the colewort, that the one will die where the other groweth. The decoction of coleworts taketh away the pains and aches, and allayeth the swellings, of swollen and gouty legs and knees, wherein many gross and watery humours are fallen, the place being bathed therewith warm; it helpeth also old and filthy sores, being bathed therewith, and healeth all small scabs, pustles, and wheals, that break out in the skin: the ashes of colewort-stalks, mixed with old hog's grease, are very effectual to anoint the side of those that have had long pains therein, or any other place pained with melancholy and windy humours. Cabbages are extreme windy, whether you take them as meat or as medicine; but colewort-flowers are something more tolerable, and the wholesomer food of the two. The Moon challengeth the dominion of the herb.

SEA-COLEWORT.

DESCRIPTION. THIS hath divers somewhat long, broad, large, thick, wrinkled, leaves, crumpled upon the edges, growing each upon a several thick footstalk, very brittle, of a greyish green colour; from among which riseth up a strong thick stalk, two feet high, or more, with some leaves thereon to the top, where it brancheth forth much, and on every branch standeth a large bush of pale whitish flowers; consisting of four leaves each: the root is somewhat large, and shooteth forth many branches under ground, keeping green leaves all the winter.

PLACE. They grow in many places upon the sea-coasts, as well on the Kentish as Essex shores; as, at Lid in Kent, Colchester in Essex, and divers other places, and in other counties, of this land.

TIME. They flower and seed about the time the other kinds do.

GOVERNMENT AND VIRTUES. The Moon claims the dominion of these also. The broth, or first decoction, of the sea-colewort, doth, by the sharp, nitrous, and bitter, qualities therein, open the belly and purge the body; it cleanseth and digesteth more powerfully than the other kind; the seed hereof, bruised and drunk, killeth worms: the leaves, or the juice of them, applied to sores or ulcers, cleanse and heal them, dissolve swellings, and take away inflammations.

C A L A M I N T.

IT is called also mountain mint.

DESCRIPTION. It is a small herb, seldom rising above a foot high, with square, hairy, and woody, stalks, and two small hoary leaves set at a joint, about the bigness of marjoram, or not much bigger, a little dented about the edges, and of a very fierce or quick scent, as the whole herb is: the flowers stand at several spaces of the stalks, from the middle almost upwards, which are small and gaping like the common mint, and of a pale bluish colour; after which follow small, round, blackish, seeds; the root is small and woody, with divers small sprigs spreading within the ground: it abideth many years.

PLACE. It groweth on heaths, and upland dry grounds, in many counties of this kingdom.

TIME. They flower in July, and their seed is ripe quickly after.

GOVERNMENT AND VIRTUES. It is an herb of Mercury, and a strong one too, therefore excellent good in all afflictions of the brain; the decoction of the herb, being drunk, bringeth down women's courses, and provoketh urine; it is profitable for those that are bursten, or troubled with convulsions or cramps, with shortness of breath, or choleric torments or pains in the belly or stomach; it also helpeth the yellow jaundice, and, being taken in wine, stayeth vomiting; taken with salt and honey, it killeth all manner of worms in the body; it helpeth such as have the leprosy, either taken inwardly, drinking whey after it, or the green herb outwardly applied; it hindereth conception in women, being either burned or strewed in the chamber; it driveth away venomous serpents. It takes away black-and-blue marks in the face, and maketh black scars become well-coloured, if the green herb be boiled in wine, and laid to the place, or the place washed therewith: being applied to the huckle-bone, by continuance of time it spendeth the humours which cause the pains of the sciatica; the juice, dropped into the ears, killeth the worms in them, the leaves, boiled in wine, and drunk, provoke sweat, and open obstructions of the liver and spleen. It helpeth them that have a tertian ague, the body being first
purged,

purged, by taking away the cold fits; the decoction hereof, with some sugar put thereto, is very profitable for those that are troubled with the overflowing of the gall, and also for those that have an old cough, and that are scarce able to breathe by shortness of their wind; that have any cold distemper in their bowels, and are troubled with the hardness of the spleen; for all which purposes both the powder called diacaluminthes, and the compound syrup of calamint, (which are to be had at the apothecaries,) are most effectual. Let not women be too busy with it, for it works very violently upon the female subject.

C A M O M I L E.

IT is so well known every where, that it is but lost time and labour to describe it. The virtues thereof are as follow:

A decoction made of camomile, and drunk, taketh away all pains and stitches in the sides; the flowers of camomile, beaten and made up into balls with oil, drive away all sorts of agues, if the party grieved be anointed with that oil, taken from the flowers, from the crown of the head to the sole of the foot, and afterwards laid to sweat in his bed; this is NICHESOR an Egyptian's medicine. It is profitable for all sorts of agues that come either from phlegm or melancholy, or from an inflammation of the bowels, being applied when the humours causing them shall be concocted; and there is nothing more profitable to the sides and region of the liver and spleen than this; the bathing with a decoction of camomile taketh away weariness, easeth pains to what part of the body soever it be applied; it comforteth the sinews that are overstrained, mollifieth all swellings; it moderately comforteth all parts that have need of warmth, digesteth and dissolveth whatsoever hath need thereof by a wonderful and speedy property. It easeth all the pains of the cholic and stone, and all pains and torments of the belly, and gently provoketh urine: the flowers, boiled in posset-drink, provoke sweat, and help to expel colds, aches, and pains, wheresoever, and are an excellent help to bring down women's courses; a syrup made of the juice of camomile with the flowers and white wine, is a remedy against the jaundice and dropsy; the flowers, boiled in lye, are good to wash the head, and comfort both it and the brain; the oil, made of the flowers of camomile is much used against all hard swellings, pains, or aches, shrinking of the sinews, or cramps or pains in the joints, or any other part of the body; being used in clysters, it helpeth to dissolve wind and pains in the belly; anointed also, it helpeth stitches and pains in the sides.

NICHESOR saith, the Egyptians dedicated it to the Sun because it cured agues; and they were like enough to do it, for they are the most superstitious people in their religion

religion I ever read of. BACCHINUS, PENA, and LOBEL, commend the syrup made of the juice of it and sugar, taken inwardly, to be excellent for the spleen. Also this is certain, that it most wonderfully breaks the stone; some take it in syrup or decoction, others inject the juice of it into the bladder with a syringe: my opinion is, that the salt of it, taken half a drachm in the morning in a little white or rhenish wine, is better than either; that it is excellent for the stone, appears in this which I have seen tried, viz. That a stone that hath been taken out of the body of a man, being wrapped in camomile, will in a short time dissolve.

WATER - CALTROP S.

THEY are called also, *tribulus aquaticus*, *tribulus lacustris*, *tribulus marinus*, caltrops, saligot, water-nuts, and water-chesnuts.

DESCRIPTION. As for the greater sort, or water-caltrop, it is but very rarely found here: two other sorts there are, which I shall here describe.---The first hath a long, creeping, and jointed, root, sending forth tufts at each joint, from which joints arise long, flat, slender, knotted, stalks, even to the top of the water, divided towards the top into many branches, each carrying two leaves on both sides, being about two inches long and half an inch broad, thin, and almost transparent; they look as though they were torn; the flowers are long, thick, and whitish, set together almost like a bunch of grapes, which being gone, there succeed, for the most part, four sharp-pointed grains altogether, containing a small white kernel in them.

The second differs not much from this, except that it delights in more clear water; its stalks are not flat, but round; its leaves are not so long, but more pointed. As for the place we need not determine, for their name shews they grow in the water.

GOVERNMENT AND VIRTUES. It is under the dominion of the Moon, and, being made into a poultice, is excellent good for hot inflammations and swellings, cankers, sore throats and mouths, being washed with the decoction; it cleanseth and strengtheneth the neck and throat much, and helpeth those swellings, which when people have, they say the almonds of the ears are fallen down; it is excellent good for the stone and gravel, especially the nuts being dried; they also resist poison, and bitings of venomous beasts.

WILD CAMPIONS.

DESCRIPTION. THE wild white campion hath many long and somewhat broad dark green leaves lying upon the ground, with divers roots therein, somewhat like plantane, but rather hairy, broader, and not so long; the hairy stalks rise up in the middle of them three or four feet high, and sometimes more, with divers great white joints at several places thereon, and two such-like leaves thereat up to the top,

sending forth branches at several joints also, all which bear, on several footstalks, white flowers at the tops of them, consisting of five broad pointed leaves, every one cut in on the end unto the middle, making them seem to be two apiece, smelling somewhat sweet, and each of them standing in large green, striped, hairy, husks, large and round below next to the stalk; the seed is small and greyish in the hard heads that come up afterwards; the root is white, long, and spreading.

The red wild campion groweth in the same manner as the white, but its leaves are not so plainly ribbed, somewhat shorter, rounder, and more woolly in handling; the flowers are of the same size and form, but some are of a pale and others of a bright red colour, cut in at the ends more finely, which makes the leaves seem more in number than the other: the seed and the roots are alike, the roots of both sorts abiding many years.

There are forty-five sorts of champions more: those of them which are of physical uses have the like virtues with these above described, which are the two chief kinds.

PLACE. They grow commonly throughout this kingdom in fields, and by hedge-sides and ditches.

TIME. They flower in summer, some earlier than others, and some abiding longer than others.

GOVERNMENT AND VIRTUES. They belong to Saturn; and it is found by experience that the decoction of the herb, either of the white or red, being drunk, doth stay inward bleedings, and applied outwardly it doth the like; also, being drunk, it helpeth to expel urine, being stopped, and gravel or stone in the reins or kidneys: two drachms of the seed, drunk in wine, will purge the body of cholerick humours, and help those that are stung by scorpions, or other venomous beasts, and may be as effectual for the plague: it is of very good use in old sores, ulcers, cankers, fistulas, and the like, to cleanse and heal them, by consuming the moist humours falling into them, and correcting the putrefaction of humours offending them:

CARDUUS BENEDICTUS.

IT is called *carduus benedictus*, or blessed thistle, or holy thistle; which name was doubtless given to it on account of its excellent qualities.

I shall spare a labour in writing a description of this, since almost every one may describe them from his own knowledge.

PLACE. It groweth plentifully in gardens.

TIME. They flower in August, and seed soon after.

GOVERNMENT AND VIRTUES. It is an herb of Mars, and under the sign Aries. Now, in treating on this herb, I shall give you a rational conception of all the

rest, and, if you please to view them throughout the book, you shall to your content find them true. It helps swimnings and giddiness of the head, or the disease called vertigo, because Aries is in the house of Mars. It is an excellent remedy against the yellow jaundice, and other infirmities of the gall, because Mars governs choler. It strengthens the attractive faculty in man, and clarifies the blood, because it is ruled by Mars. The continual drinking the decoction of it helps red faces, tetters, and ringworms, because Mars causeth them. It helps plague-fores, boils, the itch, and bitings of mad dogs and venomous beasts; all which infirmities are under Mars. Thus you see what it doth by sympathy.

By antipathy to other planets, it cures the venereal disease; this by antipathy to Venus, who governs it. It strengthens the memory, and cures deafness, by antipathy to Saturn, who hath his fall in Aries, which rules the head. It cures quartan agues, and other diseases of melancholy and adust choler, by sympathy to Saturn, Mars being exalted in Capricorn: also, it provokes urine, the stopping of which is usually caused by Mars or the Moon. It is excellent for the head and the parts thereof; this herb being eaten, or the powder or juice drunk, keepeth a person from the head-ach and megrim, and also driveth it away. Being taken in meat or drink, it is good against dizziness and swimming of the head. It comforteth the brain, sharpeneth the wit, and strengtheneth the memory; it is a singular remedy against deafness, for it amendeth the thickness of the hearing, and provokes sleep. The juice of it laid to the eyes quickeneth the sight; also, the water in which the powder, or herb dried, is steeped, hath the same effect if the eyes be washed therewith; the herb eaten, is good for the same purpose. The water or juice, dropped into the eyes, cureth the redness, bloodshot, and itching, of them. Some write that it strengthens the teeth, they being washed and rubbed with a cloth dipped in the water or juice thereof. The powder stauncheth the blood that floweth out of the nose, being applied to the place. It comforteth the stomach; the broth of the herb, otherwise called the decoction, drunk in wine, is good for an evil stomach; it helpeth a weak stomach, and causeth appetite to meat; also the wine, wherein it hath been boiled, doth cleanse and mundify the infected stomach. The powder thereof, eaten with honey, or drunk in wine, doth ripen and digest cold phlegm, purgeth and bringeth up that which is in the breast, scouring the same of gross humours, and causeth to breathe more easily. The herb, chewed in the mouth, healeth the stench of the breath. It helpeth the heart; the powder, being taken before a man is infected, preserveth him from the pestilence; and a drachm of it, or a walnut-shell full, taken immediately after he feelth himself infected, expelleth the venom of the pestilent infection from the heart, so that, if a man sweat afterwards, he may be preserved: the same effect hath the herb boiled in wine, or in the urine of a healthy man-child, and drunk; I mean the decoction or liquor from which the herb is strained, after it hath been boiled there-
in;

in; the same preparation is also good for the dropfy, the falling sickness, and to break apothumes. The leaves, powder, juice, or water, of the herb, being drunk, and the patient well covered with clothes, sweating three hours, expelleth all poisons that have been taken in at the mouth, and other corruption or infection that may hurt and annoy the heart. It helpeth the liver, lungs, and other parts of the body; the herb boiled in wine, and drunk hot about a quarter of an hour before the fit, and the patient afterwards well covered in bed, driveth away the ague. The powder and water of this herb, drunk with wine, have the same effect. The juice, drunk with wine, is good against shortness of breath, and the diseases of the lungs; it strengtheneth the members, and is good against the aches of the body. The powder, eaten or drunk, is good against fitches in the side; it is also good for those that begin to have the consumption, called the phthisic: the herb, eaten, doth strengthen trembling and paralytic members: the powder, ministered in a clyster, helpeth the cholic, and other diseases of the guts; and the water drunk hath the same effect. The juice taken with wine, or the herb boiled in wine and drunk hot, breaketh the stone, and driveth out gravel; being sodden in water, and the patient sitting over it, so that the hot vapour may come unto the diseased place, it helpeth against the same infirmity; after the same manner being used, it is good against the green sickness; also, it easeth the griping pains of the belly, openeth the stoppings of the members, and pierceth and causeth urine. The leaves boiled in wine, and drunk as aforesaid, provoke sweats, consume evil blood, and ingender good; also, the wine or water, in which this herb has boiled, being drunk, consumeth evil humours, and preserveth good. It is excellent for one that is bruised with a fall or otherwise. The leaves, juice, broth, powder, and water, of the herb, is very good to heal the canker, and old, rotten, festered, sores: the leaves bruised or pounded, and laid to, are good against burnings, hot swellings, carbuncles, and sores that are hard to be cured, especially for them of the pestilence: they are likewise good to heal the bitings of venomous worms and serpents, or creeping beasts. Finally, the down coming off the flowers thereof, when the seed is ripe, doth heal cuts and new wounds without pain*.

C A R R O T S.

GARDEN carrots are so well known that they need no description; but, because they are of less physical use than the wild kind, (as indeed almost in all herbs, the wild are most effectual in physic, as being more powerful in their operations than the garden kinds,) I shall therefore briefly describe the wild carrot.

DESCRIP-

* Thus much of *carduus benedictus*, gathered out of the HERBALS of divers learned men, which, although it may be sufficient, yet I have thought good here to set down that which two studious
and

DESCRIPTION. It groweth in a manner altogether like the tame, but that the leaves and stalks are somewhat whiter and rougher; the stalks bear large tufts of white flowers, with a deep purple spot in the middle, which are contracted together when

and skilful physicians, MATTHIOLUS and FUCHSIUS, have written hereof in Latin; whose words, as perhaps they may bring some credit to that which is already written, so in them something more may be learned, or at the least something is uttered for the better understanding of that aforesaid. Their words in English are as followeth: *Carduus benedictus* is a plant of great virtue, especially against the pestilence, and also against deadly poisons, as well taken inwardly as outwardly applied to the stings and bitings of venomous beasts; they also are healed with this herb that are troubled with a quartan or other agues that come by a cold, and that by drinking of the decoction or distilled water, or a drachm of the powder: in like manner being drunk, it helpeth infants that are troubled with the falling sickness. The decoction taken in wine doth mitigate the pain of the guts and reins, and other griefs of the belly; it provoketh sweat, killeth worms, and is good against other diseases of the womb: the herb itself, as well green as dried, both drunk and laid outwardly to the grief, doth heal ulcers: on such extraordinary occasions it is mingled with the drink made of *guaiacum*, and with wine and water for the French disease. Learned writers affirm that it taketh away the stoppings of the inward bowels; it provoketh urine, breaketh the stone, and helpeth those that are stung of venomous beasts. They say also that those cannot be infected who take it in their meat or drink before they come into the air, and that it helpeth them much that are already infected: moreover, most agree, that it is a remedy against the bitings of serpents. Finally, to conclude, late writers say, that it cureth the pains of the head, taketh away giddiness, recovereth the memory, being taken in meat or drink. Also it helpeth festering sores, especially of the paps and teats, if the powder thereof be laid upon it. By this we may in part understand, with how great virtue God hath indued, and I may say, blessed, this herb. To sum up all, it helpeth the body inwardly and outwardly; it strengthens almost all the principal members of the body, as the brain, the heart, the stomach, the liver, lungs, and kidneys. It is also a preservative against all diseases, for it provoketh sweat, by which the body is purged of much corruption which breedeth disease. It expelleth the venom of infection, it consumes ill blood, and all naughty humours, whereof diseases are engendered. Therefore, giving God thanks for his goodness which hath given us this herb, and all other things for the benefit of our health, it will in the next place be convenient to consider how to make use of it in the application.

It is to be observed, that we may use this herb, and enjoy the virtues thereof, four ways: First, in the green leaf. Secondly, in the powder. Thirdly, in the juice. And, fourthly, in the distillation. The green leaf may be taken with bread and butter, as people take sage and parsley in a morning for breakfast: and, if it be too bitter, it may be taken with honey instead of butter. It may be taken in pottage boiled among other herbs; or, being shred small, it may be drunk with ale, beer, or wine. It is sometimes given in beer with *aqua composta*, and that without harm,

when the seed begins to ripen ; so that, the middle part being hollow and low, and the outward stalks rising high, it maketh the whole umbel to shew like a bird's nest : the root is very small, long, and hard, and quite unfit for meat, being somewhat sharp and strong.

PLACE. The wild kind groweth plentifully in divers parts of this land by the field sides and in untill'd places.

TIME. They flower and seed in the end of summer.

GOVERNMENT AND VIRTUES. Wild carrots belong to Mercury, and therefore expel wind, and remove stitches in the sides, provoke urine and women's courses, and help to expel and break the stone ; the seed also of the same worketh the like effect, and is good for the dropfy and those whose bellies are swollen with wind ; it helpeth the cholic, the stone in the kidneys, and the rising of the mo-

when the stomach of the patient is weak, and he is not troubled with any hot disease. The juice may be outwardly applied ; or the leaf, powder, and water, received into the mouth. It may be taken in pottage also in the green leaf, or with wine, which, if it be burned and drunk hot, is the better. If you please, you may boil it with wine, and honey or sugar to make it sweet, and then drink it very warm. The powder may be taken with honey upon the point of a knife, or with bread and honey if you prefer it ; or else it may be drunk with ale, beer, or wine. The distilled water may be drunk by itself alone, or else with white wine, before meat, especially if the stomach be weak and cold. The liquor or broth, in the which this herb is boiled, may be made thus : Take a quart of running water, scethe it and scum it, then put into it a good handful of the herb, and let it boil until the better part be consumed ; then drink it with wine, or if you think fit with honey or sugar, to make it the more palatable. Or you may make a potion thus : Take a good handful of the leaves, with a handful of raisins of the sun, washed and stoned, and some sugar-candy and liquorice sliced small ; boil them all together in a quart of water, ale, or wine : if it be too bitter, it may be made sweet as aforesaid. It is also to be observed, that the powder and water of the herb are most to be regarded, and especially the water : for they may be long preserved, so that you may have them always in readiness for use, when neither the green leaf nor juice can be had. The water, which only is free from bitterness, may be drunk by itself alone, for the stomach and taste will bear it, being equally as palatable as rose-water. If the seed be sown as soon as it is ripe, you may have the herb both winter and summer, from the time that it beginneth to grow until the seed grow ripe again. Therefore I counsel all those who have gardens to nourish it, that they may have it always for their own use, and the use of their neighbours that stand in need of it. But perhaps some may ask a question of the time and quantity, which things are to be considered in taking of medicines. As touching the time, if it be taken for a preservative, it is good to take it in the morning, or in the evening before going to bed, because this is a convenient time to sweat, for one that feelth himself not greatly diseased. But, if a man take it to expel any ill humours, it is good to take it whenever the grief is felt in the body, and immediately to go to bed and sweat.

ther,

ther, being taken in wine; boiled in wine, and taken, it helpeth conception: the leaves, being applied with honey to running sores or ulcers, do cleanse them. I suppose the seed of them performs this better than the root; and though GALEN commended garden-carrots highly to break wind, yet experience teacheth that they breed it first; and we may thank nature for expelling it, not they. The seeds of them expel wind indeed, and so mend what the root marreth.

C A R R A W A Y.

DESCRIPTION. IT beareth divers stalks of fine cut leaves lying upon the ground, somewhat like the leaves of carrots, but not bushing so thick, of a little quick taste, from among which riseth up a square stalk not so high as the carrot, at whose joints are set the like leaves, but smaller and finer, and at the top small open tufts or umbels of white flowers, which turn into small blackish seed, smaller than anniseed, and of a quicker and hotter taste; the root is whitish, small, and long, somewhat like unto a parsnip, but with more wrinkled bark, and much less, of a little hot and quick taste, and stronger than the parsnip; it abideth after seed-time.

PLACE. It is usually sown with us in gardens.

TIME. They flower in June and July, and seed quickly after.

GOVERNMENT AND VIRTUES. This is also a mercurial plant. Carraway-feed hath a moderate sharp quality, whereby it expelleth wind and provoketh urine, which also the herb doth: the root is better food than the parsnip, and is pleasant and comfortable to the stomach, helping digestion: the seed is conducing to all the cold griefs of the head and stomach, the bowels, or mother, as also the wind in them, and helpeth to sharpen the eye-sight. The powder of the seed, put into a poultice, taketh away black-and-blue spots of blows or bruises; the herb itself, or with some of the seed, bruised and fried, laid hot in a bag or double cloth to the lower parts of the belly, easeth the pains of the wind-cholic: the roots of carraways, eaten as we eat parsnips, strengthen the stomachs of aged people exceedingly, and they need not make a whole meal of them neither; it is fit to be planted in every garden. Carraway-comfits, once only dipped in sugar, and half a spoonful of them eaten in the morning fasting, and as many after each meal, are a most admirable remedy for such as are troubled with wind.

C E L A N D I N E.

DESCRIPTION. THIS hath divers tender, round, whitish, green, stalks, with greater joints than ordinary in other herbs, as it were knees, very brittle and easy to break, from whence grow branches with large, tender, long, leaves, divided
into

into many parts, each of them cut in on the edges, set at the joints on both sides of the branches, of a dark bluish green colour on the upper side, like columbines, and of a more pale bluish green underneath, full of a yellow sap when any part is broken, of a bitter taste and strong scent; at the tops of the branches, which are much divided, grow gold-yellow flowers of four leaves each, after which come small long pods, with blackish seed therein. Its root is somewhat great at the head, shooting forth divers long roots and small strings, reddish on the outside, and yellow within; and is full of a yellow sap.

PLACE. It groweth in many places, by old walls, by the hedges and way-sides in untilld places; and, being once planted in a garden, especially in a shady place, it will remain there.

TIME. They flower all the summer long, and the seed ripeneth in the mean time.

GOVERNMENT AND VIRTUES. This is an herb of the Sun, and under the celestial Lion, and is one of the best cures for the eyes that is. All, that know any thing of Astrology, know, as well as I can tell them, that the eyes are subject to the luminaries; let it then be gathered when the Sun is in Leo, and the Moon in Aries applying to his trine. Let Leo arise, then you may make it into an oil or ointment, which you please, to anoint sore eyes with; I can prove it, both from my own experience and the experience of those to whom I have taught it, that the most desperate sore eyes have been cured by this medicine only; then, I pray, is not this far better than endangering the eyes by the art of the needle? for, if this do not absolutely take away the film, it will so facilitate the work that it may be done without danger. The herb or root being boiled in white wine with a few anniseeds therein, and drunk, openeth obstructions of the liver and gall, helpeth the yellow jaundice, and, often using it, helps the dropsy, the itch, and those who have old sores in their legs, or other parts of their body. The juice thereof taken fasting, is held to be of singular good use against the pestilence; the distilled water with a little sugar, and a little good treacle mixed therewith, (the party upon taking it being laid down to sweat a little,) hath the same effect: the juice, dropped into the eyes, cleanseth them from films and cloudiness, which darken the sight; but it is best to allay the sharpness of the juice with a little breast-milk; it is good in old, filthy, corroding, creeping, ulcers wheresoever, to stay their malignity of fretting and running, and to cause them to heal more speedily; the juice, often applied to tetters, ringworms, or other such-like spreading cankers, will quickly heal them, and, rubbed often upon warts, will take them away. The herb, with the roots bruised, and bathed with oil of camomile, and applied to the navel, taketh away the griping pains in the belly and bowels, and all the pains of the mother, and, applied to women's breasts, stayeth the over-much flowing of their courses; the juice or decoction

of the herb, gargled between the teeth that ach, easeth the pain; and the powder of the dried root, laid upon an aching, hollow, or loose, tooth, will cause it to fall out. The juice, mixed with some powder of brimstone, is not only good against the itch, but taketh away all discolourings of the skin whatsoever, and, if it chance that in a tender body it causeth any itching or inflammation, it is helped.

Another bad method have physicians in administering relief to the eye, which is worse than the needle: that is, to eat away the film by corroding or gnawing medicines: this I absolutely protest against; 1. Because the tunicles of the eyes are very thin, and therefore soon eaten asunder. 2. The *callus* or film that they would eat away is seldom of an equal thickness in every place, and by that means the tunicle may be eaten asunder in one place, before the film be consumed in another, and so prove a readier way to extinguish the sight than to restore it. It is called *chelonium* from the Greek word *χελών*, which signifies a swallow, because they say, that if you prick out the eyes of young swallows when they are in the nest, the old ones will recover their eyes again with this herb. This I am confident of, (for I have tried it,) that, if you mar the very apple of their eyes with a needle, she will recover them again; but whether with this herb or not, I do not know.

Also, I have read, (and it seems to me somewhat probable,) that the herb being gathered, as I shewed before, and the elements separated from it by the art of the alchymist, and, after they are drawn apart, rectified, the earthy quality still in rectifying them, added to the *terra damnata*, as alchymists call it, or as some philosophers term it, *terra sacratissima*; the elements so rectified are sufficient for the cure of all diseases, the humour offending being known, and the contrary element given. It is an experiment worth the trying, and can do no harm.

SMALLER CELANDINE.

IT is usually known by the name of pilewort, and fogwort, and I wonder much on what account the name of celandine was given it, which resembles it neither in nature or form. It acquired the name of pilewort from its virtues; and, it being no matter where I set it down, so I do not quite omit it, I shall proceed to the description.

DESCRIPTION. This celandine, or pilewort, doth spread many round, pale, green, leaves, set on weak and trailing branches, which lie upon the ground, and are flat, smooth, and somewhat shining, and in some places, though seldom, marked with black spots, each standing on a long footstalk, among which rise small yellow flowers, consisting of nine or ten small narrow leaves, upon slender footstalks, very like a crow-foot, whereunto the seed also is not unlike, being many small ones set

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together upon a head: the root is composed of many small kernels like grains of corn, some twice as long as others, of a whitish colour, with some fibres at the end of them.

PLACE. It groweth for the most part in the moist corners of fields, and places near water-sides, yet will abide in drier grounds, if they are but a little shadowed.

TIME. It flowereth about March or April, and is quite gone in May, so that it cannot be found until it springs again.

GOVERNMENT AND VIRTUES. It is under the dominion of Mars; and behold here another verification of that learning of the ancients, viz. that the virtue of an herb may be known by its signature, as plainly appears in this; for, if you dig up the root of it, you shall see the perfect image of that disease which is commonly called the piles. It is certain, from good experience, that the decoction of the leaves and roots doth wonderfully help the piles and hemorrhoids, as also kernels by the ears and throat, called the king's evil, or any other hard wens or tumours. Pilewort made into an oil, ointment, or plaister, readily cures both the piles, hemorrhoids, and the king's evil; the very herb borne about one's body, next to the skin, helps in such diseases, though it does not touch the place grieved. Let poor people make much of this for these uses, for, with this I cured my own daughter of the king's evil, broke the fore, drew out a quarter of a pint of corrupt matter, and in one week made a complete cure without a scar.

ORDINARY SMALL CENTAURY.

DESCRIPTION. **THIS** groweth up most usually with but one round and somewhat crested stalk, about a foot high, or better, branching forth at the top into many sprigs, and some also from the joints of the stalks below; the flowers that stand at the tops, as it were in an umbel or tuft, are of a pale red, tending to a carnation colour, consisting of five, sometimes six, small leaves, very like those of St. John's wort, opening themselves in the day-time, and closing at night; after which cometh the seed in little short husks, in form like wheat-corns: the leaves are small and somewhat round: the root is small and hard, perishing every year. The whole plant is of an exceeding bitter taste.

There is another sort of centaury in all things like the former, save only that it beareth white flowers.

PLACE. They grow generally in fields, pastures, and woods; but, that with the white flowers not so frequently as the other.

TIME. They flower in July, or thereabouts, and seed within a month after.

GOVERNMENT AND VIRTUES. They are all under the dominion of the Sun, as appears in that their flowers open and shut as the Sun either sheweth or hideth his face.

face. This herb boiled, and drunk, purgeth cholerick and gross humours, and helpeth the sciatica; it openeth obstructions of the liver, gall, and spleen, helping the jaundice, and easing the pains of the sides, and hardness of the spleen, if used outwardly; it is given with good effect in agues, and helpeth those that have the dropsy, or the green sickness, being much used in powder by the Italians for that purpose: and it killeth worms in the belly, as found by experience. The decoction thereof, viz. the tops of the stalks with the leaves and flowers, is good against the cholick, and to bring down women's courses; it helpeth to expel the dead birth, and easeth pains of the mother, and is very effectual in all old pains of the joints, as the gout, cramps, or convulsions. A drachm of the powder thereof, taken in wine, is a wonderful good help against the biting and poison of an adder: the juice of the herb, with a little honey put to it, is good to clear the eyes from dimness, mists, and clouds, that offend and hinder the sight; it is very good both for green and fresh wounds, as also for old ulcers and sores, to close up the one and cleanse the other, and to perfectly cure them both, although they are hollow or fistulous; especially if the green herb be bruised, and laid thereto: the decoction thereof, dropped into the ears, frees them from worms, cleanseth the foul ulcers and spreading scabs of the head, and taketh away all freckles, spots, and marks, of the skin, being washed therewith; the herb is so safe you cannot fail in the using of it. Take it inwardly only for inward diseases, and apply it outwardly for outward complaints: it is very wholesome, but not pleasant to the taste.

There is besides these another small centaury, which beareth a yellow flower; in all other respects it is like the former, save that the leaves are bigger, and of a darker green, and the stalk passeth through the midst of them, as it does in the herb thoroughwax. They are all of them, as I said before, under the dominion of the Sun; yet this, if you observe it, you will find an excellent truth:---In diseases of blood, use the red centaury; if of choler, use the yellow; but, if of phlegm or water, you will find the white best.

C H E R R Y - T R E E.

I SUPPOSE there are few but know this tree, if only for its fruit's sake, and therefore I shall decline writing a description.

PLACE. For the place of its growth, it is afforded room in every orchard.

GOVERNMENT AND VIRTUES. It is a tree of Venus. Cherries, as they are of different tastes, so they are of divers qualities; the sweet pass through the stomach and belly more speedily, but are of little nourishment; the tart or sour are more
pleasing

pleasing to a hot stomach, procuring appetite to meat, and helping to cut tough phlegm and gross humours; but, when these are dried, they are more binding than when they are fresh, being cooling in hot diseases, and welcome to the stomach; it also provokes urine. The gum of the cherry-tree, dissolved in wine, is good for a cough, and hoarseness of the throat; it mendeth the colour in the face, sharpeneth the eye-sight, provoketh the appetite, and helpeth to break and expel the stone. Black cherries bruised with the stones, and distilled, the water thereof is much used to break the stone, expel gravel, and break wind.

WINTER - CHERRIES.

DESCRIPTION. THE winter-cherry hath a running or creeping root in the ground, generally of the size of one's little finger, shooting forth at several joints, in several places, whereby it quickly spreadeth over a great compass of ground; the stalk riseth not above a yard high, whereon are set many broad and long green leaves, somewhat like night-shade, but larger; at the joints whereof come forth whitish flowers made of five leaves each, which after turn into green berries, enclosed with a thin skin, which change to reddish when they grow ripe, the berry likewise being reddish and as large as a cherry, wherein are contained many flat yellowish seeds, lying within the pulp, which, being gathered and strung up, are kept all the year, to be used upon occasion.

PLACE. They do not grow naturally in this land, but are cherished in gardens for their virtues.

TIME. They flower not until the middle or latter end of July, and the fruit is ripe about the end of August, or beginning of September.

GOVERNMENT AND VIRTUES. This is also a plant of Venus. They are of great use in physic: the leaves, being cooling, may be used in inflammations, but not opening as the berries and fruit are, which, by drawing down the urine, provoke it to be voided plentifully when it is stopped, or grown hot, sharp, and painful in the passage; it is good also to expel the stone and gravel out of the reins, kidneys, and bladder, helping to dissolve the stone, and voiding it by grit or gravel sent forth in the urine; it also helpeth much to cleanse inward imposthumes or ulcers in the reins or bladder, or in those that void a bloody or foul urine: the distilled water of the fruit, or the leaves together with them, or the berries green or dry, distilled with a little milk, and drunk morning and evening with a little sugar, is effectual to all the purposes before specified, and especially against the heat and sharpness of the urine. I shall only mention one way amongst many others, which might be used for ordering the berries to be helpful for the urine and stone, which is thus;

Take

Take three or four good handfuls of the berries, either green or fresh, or dried, and, having bruised them, put them into so many gallons of beer or ale, when it is newly tunned up; this drink, taken daily, hath been found to do much good to many, both to ease the pains, expel urine and the stone, and to cause the stone not to ingender. The decoction of the berries in wine and water is the most usual way, but the powder of them taken in drink is the most effectual.

C H E R V I L.

IT is called *cerefolium*, *mirrhis* and *mirtha*, *chervil*, *sweet chervil*, and *sweet cicely*.

DESCRIPTION. The garden chervil doth at first resemble parsley, but, after it is more grown, the leaves are much cut and jagged, resembling hemlock, being a little hairy, and of a whitish green colour, sometimes turning reddish in the summer, as do the stalks also; it riseth little more than half a foot high, bearing white flowers in spiked tufts, which turn into long and round seeds, pointed at the ends, and blackish when they are ripe, of a sweet taste, but no smell, though the herb itself smelleth reasonably well: the root is small and long, and perisheth every year, and must be sown in the spring for seed, and after July for autumn-fallad.

The wild chervil groweth two or three feet high, with yellow stalks and joints, set with broader and more hairy leaves, divided into sundry parts, nicked about the edges, and of a dark green colour, which likewise groweth reddish with the stalks; at the tops whereof stand small white tufts of flowers, and afterwards smaller and longer seed: the root is white, hard, and endureth long. This hath little or no scent.

PLACE. The first is sown in gardens for a fallad-herb; the second groweth wild in the meadows of this land, and by hedge-sides, and on heaths.

TIME. They flower and seed early, and thereupon are sown again at the end of the summer.

GOVERNMENT AND VIRTUES. The garden chervil, being eaten, doth moderately warm the stomach, and is a certain remedy to dissolve congealed or clotted blood in the body, or that which is clotted by bruises, falls, &c. the juice or distilled water thereof being drunk, and the bruised leaves laid to the place; being taken either in meat or drink, it is held good to provoke urine, or expel the stone in the kidneys, to bring down women's courses, and to help the pleurisy and prickings of the sides. The wild chervil, bruised and applied, dissolveth swellings in any part of the body, and taketh away spots and marks of congealed blood, by bruises or blows, in a short time.

SWEET CHERVIL,

CALLED by some sweet cicely.

DESCRIPTION. It groweth very much like the greater hemlock, having large spread leaves, cut into divers parts, but of a fresher green colour than hemlock, tasting as sweet as anniseed; the stalk riseth up a yard high, or more, being crested or hollow, having the leaves at the joints, but less, and at the tops of the branched stalks umbels or tufts of white flowers; after which come large and long-crested, black, shining, seed, pointed at both ends, tasting quick, yet sweet and pleasant: the root is great and white, growing deep in the ground, and spreading sundry long branches therein, in taste and smell stronger than the leaves or seed, and continuing many years.

PLACE. It groweth in gardens.

GOVERNMENT AND VIRTUES. These are all three of them of the nature of Jupiter, and under his dominion. This whole plant, besides its pleasantness in sallads, hath also its physical virtues; the root, boiled and eaten with oil and vinegar, or without oil, doth much please and warm an old and cold stomach, oppressed with wind or phlegm, or those that have the phthysic or consumption of the lungs; the same, drunk with wine, is a preservative from the plague; it provoketh women's courses, and expelleth the after-birth, procureth an appetite to meat, and expelleth wind: the juice is good to heal the ulcers of the head and face; the candied roots hereof are held as effectual as angelica to preserve from infection in the time of a plague, and to warm and comfort a cold weak stomach. It is so harmless that you cannot make use of it amiss.

CHESNUT-TREE.

'TO describe a tree so commonly known were needless; therefore take the government and virtues of it thus.

The tree is absolutely under the dominion of Jupiter, and therefore the fruit must needs breed good blood, and yield commendable nourishment to the body; yet, if eaten overmuch, they make the blood thick, procure the head-ach, and bind the body; the inner skin that covereth the nut is of so binding a quality, that a scruple of it being taken by a man, or ten grains by a child, soon stops any flux whatsoever: the whole nut being dried and beaten into powder, and a drachm taken at a time, is a good remedy to stop the terms in women. If you dry chesnuts, and beat the kernels into powder, both the barks being taken away, and make it up into an electuary with honey, you have an admirable remedy for a cough and spitting of blood.

EARTH-

EARTH - CHESNUTS.

THEY are called earth-nuts, earth chesnuts, **ground-nuts**, **cipper-nuts**, and in Suffex they are called **pig-nuts**. A description of **them** were needless, for every child knows them.

GOVERNMENT AND VIRTUES. They are **something hot** and dry in quality, under the dominion of Venus; they provoke lust exceedingly, and stir up to those sports she is mistress of; the seed is excellent good to provoke urine, and so also is the root, but doth not perform it so forceably as the seed. The root being dried and beaten into powder, and the powder made into an electuary, is a singular a remedy for spitting blood or voiding the same by urine.

CHICK - WEED.

IT is generally known to most people; I shall not therefore trouble you with the description thereof, nor myself with setting forth the several kinds, since there are but two or three worth notice for their usefulness.

PLACE. These are usually found in moist and watery places, by wood sides, and elsewhere.

TIME. They flower about June, and their seed is ripe in July.

GOVERNMENT AND VIRTUES. It is a fine, soft, pleasing, herb, under the dominion of the Moon. It is found to be as effectual as purslain to all the purposes whereunto it serveth, except for meat only. The herb bruised, or the juice applied, with cloths or sponges dipped therein, to the region of the liver, and as they dry to have fresh applied, doth wonderfully temper the heat of the liver, and is effectual for all imposthumes and swellings whatsoever; for all redness in the face, wheals, pushes, itch, and scabs, the juice being either simply used, or boiled in hog's grease; the same helpeth cramps, convulsions, and palsies: the juice or distilled water is of good use for all heat and redness in the eyes, to drop some of it into them; as also into the ears to ease the pains in them; and is of good effect to ease the pains and heat, and sharpness of blood, in the piles, and all pains of the body in general that proceed from heat; it is used also in hot and virulent ulcers and sores in the privy parts of men and women, or on the legs, or elsewhere. The leaves boiled with marshmallows, and made into a poultice with fenugreek and linseed, applied to swellings or imposthumes, will ripen and break them, or assuage the swellings and ease the pain. It helpeth the sinews when they are shrunk by cramps or otherwise and extends and makes them pliable again, by using the following method viz. Boil an handful of chickweed, and a handful of dried red rose leaves, (but not distilled,)

distilled,) in a quart of muscadine until a fourth part be consumed; then put to them a pint of oil of trotters, or sheep's feet; let them boil a good while, still stirring them well, which being strained, anoint the grieved part therewith warm against the fire, rubbing it well with your hand, and bind also some of the herb, if you choose, to the place, and, with God's blessing, it will help in three times dressing.

CHICH-PEASE.

THEY are also called by some cicers.

DESCRIPTION. The garden sorts, whether red, black, or white, bring forth stalks a yard long, whereon doth grow many small and almost round leaves, dented about the edges, set on both sides of a middle rib; at the joints come forth one or two flowers upon sharp footstalks, pease-fashion, either whitish or purplish red, lighter or deeper according as the pease that follow will be, which are contained in small, thick, and short, pods, wherein lie one or two pease, though usually more, a little pointed at the lower end, and almost round at the head, yet a little cornered or sharp. The root is small, and perisheth yearly.

PLACE AND TIME. They are sown in gardens, or in fields, as pease, being sown later than pease, and gathered at the same time with them, or presently after.

GOVERNMENT AND VIRTUES. They are both under the dominion of Venus. They are no less windy than beans, but nourish more; they provoke urine, and are thought to increase sperm; they have a cleansing faculty, whereby they break the stone in the kidneys. To drink the cream of them being boiled in water is the best way. It moveth the belly downwards, provoketh women's courses and urine, and increaseth both milk and feed. One ounce of cicers, two ounces of French barley, and a small handful of marshmallow-roots, clean washed and cut, being boiled in the broth of a chicken, and four ounces taken in the morning, fasting two hours after, is a good medicine for a pain in the sides. The white cicers are used more for meat than medicine, yet have they the same effect, and are thought more powerful to increase milk and feed.

The wild cicers are so much more powerful than the garden kinds, by how much they exceed them in heat and driness, whereby they are more effectual in opening obstructions, breaking the stone, and having all the properties of cutting, opening, digesting, and dissolving, more speedily and certainly than the former.

CINQUEFOIL.

IT is called in some countries, five-fingered grass, or five-leaved grass.

DESCRIPTION. This spreadeth and creepeth far upon the ground, with long slender

slender strings like strawberries, which take root again; and shooteth forth many leaves made of five parts, and sometimes of seven, dented about the edges and somewhat hard. The stalks are slender, leaning downwards, and bear many small yellow flowers thereon, with some yellow threads in the middle, standing about a smooth green head; which, when it is ripe, is a little rough, and containeth small brownish seed. The root is of a blackish brown colour, seldom so big as one's little finger, but growing long with some threads thereat; and, by the small strings it quickly spreadeth over the ground.

PLACE. It groweth by wood-fides, hedge-fides, the pathways in fields, and in the borders and corners of them, almost in every part of this kingdom.

TIME. It flowereth in summer, some sooner, some later.

GOVERNMENT AND VIRTUES. This is an herb of Jupiter, and therefore strengthens the parts of the body that he rules; let Jupiter be angular and strong when it is gathered, and, if you give but a scruple (which is but twenty grains) of it at a time, either in white wine or white wine vinegar, you shall very seldom miss the cure of an ague, be it what ague soever, in three fits, as I have often proved to the admiration both of myself and others. It is an especial herb used in all inflammations and fevers, whether infectious or pestilential; or among other herbs to cool and temper the blood and humours in the body: as also, for all lotions, gargles, injections, and the like, for sore mouths, ulcers, cankers, fistulas, and other corrupt, foul, or running, sores. The juice hereof drunk, about four ounces at a time, for certain days together, cureth the quinsy and the yellow jaundice, and, taken for thirty days together, cureth the falling sickness. The roots boiled in milk, and drunk, are a most effectual remedy for all fluxes in man or woman, whether the whites or reds, as also the bloody flux. The roots boiled in vinegar, and the decoction thereof held in the mouth, ease the pains of the tooth-ach. The juice or decoction, taken with a little honey, helpeth the hoarseness of the throat, and is very good for the cough of the lungs. The distilled water both of the root and leaves, is also effectual to all the purposes aforesaid; and, if the hands are often washed therein, and it be suffered always to dry in of itself without wiping, it will in a short time help the palsy, or shaking in them. The root, boiled in vinegar, helpeth all knots, kernels, hard swellings, and lumps, growing in any part of the flesh, being thereto applied; as also all inflammations, St. Anthony's fire, and all imposthumes and painful sores, with heat and putrefaction, the shingles, and all other sorts of running and foul scabs, sores, and the itch. The same also boiled in wine, and applied to any painful or aching joints, or the gout in the hands or feet, or the hip-gout, called the sciatica, and the decoc-

tion thereof drunk at the same time, doth cure them, and easeth violent pains in the bowels. The roots are likewise effectual to help ruptures or burstings, being used with other things available to that purpose, taken either inwardly or outwardly, or both : as also for bruises, or hurts, by blows, falls, or the like, and to stay the bleeding of wounds in any part, either inward or outward.

Some hold that one leaf cures a quotidian, three a tertian, and four a quartan, ague ; but, with respect to the number of leaves, it is a matter of no consequence, or whether it is given in powder or decoction : if Jupiter were strong, and the Moon applying to him, or his good aspect, at the gathering of it, I never knew it miss the desired effects.

C I V E S.

THEY are also called rush-leeks, chives, civet, and sweth.

TEMPERATURE AND VIRTUES. I confess I had not added these had it not been for a letter I received of a country gentleman, who certified me that amongst other herbs I had left these out ; they are indeed a kind of leeks, hot and dry in the fourth degree as they are, and also under the dominion of Mars ; if they are eaten raw, (I do not mean raw opposite to roasted or boiled, but raw opposite to a chymical preparation,) they send up very hurtful vapours to the brain, causing troublesome sleep, and spoiling the eye-sight, yet of them prepared by the art of the alchymist may be made an excellent remedy for stoppage of urine.

C L A R Y,

OR, more properly, clear-eye.

DESCRIPTION. Our ordinary garden-clary hath four-square stalks, with broad, rough, wrinkled, whitish, or hairy, green leaves, somewhat evenly cut on the edges, and of a strong sweet scent, growing some near the ground, and some by couples upon stalks : the flowers grow at certain distances with two small leaves at the joints under them, somewhat like the flowers of sage, but smaller, and of a whitish blue colour : the seed is brownish, and somewhat flat, or not so round as the wild : the roots are blackish, and do not spread far : it perisheth after the seeding time. It is usually sown, for it seldom riseth of its own sowing.

PLACE. This groweth in gardens.

TIME. It flowereth in June and July, some a little later than others ; and their seed is ripe in August, or thereabout.

GOVERN-

GOVERNMENT AND VIRTUES. It is under the dominion of the Moon. The seed is used to be put into the eyes to clear them from moats, or other such-like things gotten within the lids to offend them, as also to cleanse them from white or red spots in them. The mucilage of the seed made with water, and applied to tumours, or swellings, disperfeth and taketh them away; and also draweth forth splinters, thorns, or other things gotten into the flesh. The leaves used with vinegar, either by itself or with honey, doth help hot inflammations, as also boils, fellons, and the hot inflammations that are gathered by their pains, if it be applied before they are grown too great. The powder of the dried root, put into the nose, provoketh sneezing, and thereby purgeth the head and brain of much rheum and corruption. The seed or leaves, taken in wine, provoketh to venery. It is of much use both for men and women that have weak backs, to help to strengthen the reins, used either by itself or with other herbs conducing to the same effect, and intancies often. The fresh leaves dipped in a batter of flour, eggs, and a little milk, and fried in butter, and served to the table, is not unpleasant to any, but exceeding profitable for those that are troubled with weak backs, and the effects thereof. The juice of the herb put into ale or beer, and drunk, bringeth down women's courses, and expelleth the after-birth.

It is an usual course with many men, when they have gotten the running of the reins, or women the whites, they have immediate recourse to the clary-bush, which, having fried in butter, they eagerly eat in expectation of instant relief, but to their great disappointment often find themselves worse than before they had tried this expedient. We will grant that clary strengthens the back; but this we deny, that the cause of the running of the reins in men or the whites in women lies in the back, (though the back may sometimes be weakened by them,) consequently the application of this medicine is absolutely improper.

WILD CLARY.

WILD CLARY is often (though I think imprudently) called Christ's eye, because it cureth the diseases of the eyes.

DESCRIPTION. It is like the other clary, but less, with many stalks about a foot and a half high; the stalks are square and somewhat hairy; the flowers of a bluish colour. He that knows the common clary cannot be ignorant of this.

PLACE. It grows commonly in this kingdom, in barren places; you may find it plentifully if you look in the fields near Gray's Inn, and the fields near Chelsea.

TIME. They flower from the beginning of June to the latter end of August.

GOVERN

GOVERNMENT AND VIRTUES. It is something hotter and drier than the garden clary, yet nevertheless under the dominion of the Moon. The seeds of it, being beaten to powder and drunk in wine, are an admirable help to provoke lust; a decoction of the leaves, being drunk, warms the stomach, and it were a wonder if it should not, the stomach being under Cancer, the house of the Moon; it also helps digestion, scatters congealed blood in any part of the body, and helps dimness of sight; the distilled water thereof cleanseth the eyes of redness, waterishness, and heat; it is an excellent remedy for dimness of sight, to take one of the seeds of it and put into the eye, and there let it remain till it drops out of itself; the pain will be nothing to speak of: it will cleanse the eyes of all filthy and putrified matters; and, in often repeating, it will take off a film which covereth the sight, which is a handfomer, safer, and easier, remedy, a great deal, than to tear it off with a needle.

CLEAVERS.

IT is also called aparine, goose-share, and goose-grass.

DESCRIPTION. The common cleavers hath divers very rough square stalks, not so big as the tag of a point, but rising up to be two or three yards high sometimes, if it meets with any tall bushes or trees whereon it may climb, yet without any clasps; or else much lower, and lying upon the ground full of joints, and at every one of them shooteth forth a branch, besides the leaves thereat, which are usually six, set in a round compass like a star, or the rowel of a spur: from between the leaves of the joints towards the tops of the branches, come forth very small white flowers at every end upon small thready footstalks; and, after they are fallen, there do shew two small, round, rough seeds, which, when they are ripe, grow hard and whitish, having a little hole on the side somewhat like unto a navel. Both stalks, leaves, and seeds, are so rough, that they will cleave unto any thing that shall touch them. Its root is small and very thready, spreading much in the ground, but dieth every year.

PLACE. It groweth by the hedge and ditch sides, in many places of this land, and is so troublesome an inhabitant in gardens, that it rampeth upon, and is ready choak, whatever grows near it.

TIME. It flowereth in June and July, and the seed is ripe, and falleth again, about the end of July or August, from whence it springeth up again, and not from the old roots.

GOVERNMENT AND VIRTUES. It is under the dominion of the Moon. The juice of the herb, and the seed taken in wine, help those that are bitten by an adder, by preserving the heart from the venom. It is familiarly taken in broth to

keep those lean and lank that are apt to grow fat. The distilled water, drunk twice a-day, helpeth the yellow jaundice, and the decoction of the herb by experience is found to do the same, and stayeth the lasks and bloody fluxes. The juice of the leaves, or the leaves a little bruised, and applied to any bleeding wound, stayeth the bleeding; the juice is also very good to close up the lips of green wounds; and the powder of the dried herb, strewed thereupon, doth the same, and likewise helpeth old ulcers. Being boiled with hog's greafe, it healeth all sorts of hard swellings or kernels in the throat, being anointed therewith. The juice, dropped into the ears, taketh away the pains from them. It is a good remedy in the spring, eaten, being first chopped small and boiled well, in water gruel, to cleanse the blood and strengthen the liver, thereby keeping the body in health, and fitting it for the change of season that is coming.

CLOWN'S WOUND-WORT.

DESCRIPTION. IT groweth up sometimes to three or four feet high, but usually about two feet, with square, green, rough, stalks, but slender, jointed somewhat far asunder, and two very long, and somewhat narrow, dark green leaves, bluntly dented about the edges, and ending in a long point. The flowers stand toward the tops, compassing the stalks at the joints with the leaves, and end likewise in a spiked top, having long gaping hoods, of a purplish red colour with whitish spots in them, standing in somewhat rough husks, wherein afterwards stand blackish round seeds. The root is composed of many long strings, with some tuberos long knobs growing among them, of a pale yellowish or whitish colour, yet at some times of the year these knobby roots in many places are not seen in the plant: the whole plant smelleth somewhat strongly.

PLACE. It groweth in sundry counties of this land, both north and west, and frequently by path sides in the fields near about London, and within three or four miles distance about it, yet usually grows in or near ditches.

TIME. It flowereth in June and July, and the seed is ripe soon after.

GOVERNMENT AND VIRTUES. It is under the dominion of the planet Saturn. It is singularly effectual in all fresh and green wounds, and therefore beareth not this name for nought. And is very available in staunching of blood, and to dry up the fluxes of humours in old fretting ulcers, cancers, &c. that hinder the healing of them. A syrup made of the juice of it is inferior to none for inward wounds, ruptures of veins, bloody flux, vessels broken, bloody urine, or spitting of blood: ruptures are excellently and speedily, even to admiration, cured by taking now and

then a little of the syrup, and applying an ointment or plaster of the herb to the place; and also, if any vein be swelled, or muscle cut, apply a plaster of this herb to it, and, if you add a little comfrey to it, it will not do amiss. This herb deserves commendation though it have but a clownish name, and, whoever reads this, if he try it as I have done, will commend it as well as me.---It is of an earthy nature.

COCK'S HEAD.

OTHERWISE called red fitchling, or medick fetch.

DESCRIPTION. This hath divers weak but rough stalks, half a yard long, leaning downwards, beset with winged leaves, longer and more pointed than those of lentils, and whitish underneath; from the tops of those stalks arise up other slender stalks, naked without leaves unto the tops, where there grow many small flowers in manner of a spike, of a pale reddish colour, with some blueness among them; after which rise up in their places, round, rough, and somewhat flat, heads. The root is tough and somewhat woody, yet liveth and shooteth afresh every year.

PLACE. It groweth under hedges, and sometimes in the open fields, in divers places of this land.

TIME. They flower all the months of July and August, and the seed ripeneth in the mean while.

GOVERNMENT AND VIRTUES. It is under the dominion of Venus. It hath power to ratify and digest, and therefore the green leaves bruised, and laid as a plaster, disperse knots, nodes, or kernels, in the flesh: and if, when it is dry, it be taken in wine, it helpeth the stranguary; and, being anointed with oil, it provoketh sweat. It is a singular food for cattle, to cause them to give store of milk; and why then may it not do the like being boiled in the ordinary drink of nurses?

COLUMBINES.

THESE are so well known, growing in almost every garden, that I think I may save the writing a description of them.

TIME. They flower in May, and abide not for the most part when June is past, perfecting their seed in the mean time.

GOVERNMENT AND VIRTUES. It is also an herb of Venus. The leaves of columbines are commonly used in lotions, with good success, for sore mouths and throats; Tragus saith, that a drachm of the seed, taken in wine, with a little saffron, openeth obstruc-

obstructions of the liver, and is good for the yellow jaundice, if the party after the taking thereof be laid to sweat well in his bed: the seed also taken in wine causeth a speedy delivery of women in child-birth; if one draught suffice not, let her drink a second, and it will be effectual. The Spaniards used to eat a piece of the root hereof fasting, many days together, to help them when troubled with the stone in the reins or kidneys.

COLT's FOOT.

CALLED also cough-wort, foal's-foot, horse-hoof, and bull's-foot.

DESCRIPTION. This shooteth up a slender stalk with small yellowish flowers, somewhat early, which fall away quickly; after they are past, come up somewhat round leaves, sometimes dented a little about the edges, much less, thicker, and greener, than those of butter-bur, with a little down or frieze over the green leaf on the upper side, (which may be rubbed away,) and whitish or mealy underneath. The root is small and white, spreading much under ground, so that where it taketh it will hardly be driven away again, if any little piece be abiding therein; and from thence spring fresh leaves.

PLACE. It groweth as well in wet grounds as in drier places.

TIME. It flowereth in the end of February, the leaves beginning to appear in March.

GOVERNMENT AND VIRTUES. The plant is under Venus. The fresh leaves, or juice, or a syrup made thereof, are good for a hot, dry cough, for wheezings and shortness of breath: the dry leaves are best for those that have thin rheums, and distillations upon their lungs, causing a cough, for which also the dried leaves taken as tobacco, or the root, is very good. The distilled water hereof simply, or with elder-flowers and night-shade, is a singular remedy against all hot agues, to drink two ounces at a time, and apply cloths wet therein to the head and stomach; which also doth much good being applied to any hot swellings or inflammations; it helpeth St. Anthony's fire and burnings, and is singularly good to take away wheals and small pushes that arise through heat; as also the burning heat of the piles, or privy parts, cloths wet therein being thereunto applied.

COMFREY.

DESCRIPTION. THE common great comfrey hath divers very large and hairy green leaves, lying on the ground, so hairy or prickly, that, if they touch any tender part of the hands, face, or body, they will cause it to itch: the stalk that riseth up from among them,

them, being two or three feet high, hollowed, and cornered, is also very hairy, having many such-like leaves as grow below, but runs less and less up to the top. At the joints of the stalks it is divided into many branches, with some leaves thereon, and at the ends stand many flowers in order one above another, which are somewhat long and hollow like the finger of a glove, of a pale whitish colour, after which come small black seed. The roots are great and long, spreading great thick branches under ground, black on the outside and whitish within, short or easy to break, and full of a glutinous or clammy juice, of little or no taste.

There is another sort in all things like this, save only it is somewhat less, and beareth flowers of a pale purple colour.

PLACE. They grow by ditches and water-sides, and in divers fields that are moist, for therein they chiefly delight to grow: the first generally through all the land, and the other not quite so common.

TIME. They flower in June and July, and give their seed in August.

GOVERNMENT AND VIRTUES. This is also an herb of Saturn, and I suppose under the sign Capricorn, cold, dry, and earthy, in quality. What was spoken of clown's wound-wort may be said of this: the great comfrey helpeth those that spit blood, or make bloody urine; the root boiled in water or wine, and the decoction drunk, helpeth all inward hurts, bruises, and wounds, and the ulcers of the lungs, causeth the phlegm that oppresseth them to be easily spit forth; it stayeth the defluxions of rheum from the head upon the lungs, the fluxes of blood or humours by the belly, women's immoderate courses, as well the reds as the whites; and the running of the reins happening by what cause soever. A syrup made thereof is very effectual for all those inward griefs and hurts; and the distilled water for the same purpose also, and for outward wounds and sores in the fleshy or sinewy part of the body wheresoever; as also to take away the fits of agues, and to allay the sharpness of humours. A decoction of the leaves hereof is available to all the purposes, though not so effectual as of the roots. The roots, being outwardly applied, help fresh wounds or cuts immediately, being bruised and laid thereunto; and is especial good for ruptures and broken bones; yea, it is said to be so powerful to consolidate and knit together, that, if they are boiled with dismembered pieces of flesh in a pot, it will join them together again. It is good to be applied to women's breasts that grow sore by the abundance of milk coming into them; as also to repress the over-much bleeding of the hemorrhoids, to cool the inflammation of the parts thereabout, and to give ease to the pains. The roots of comfrey taken fresh, beaten small, spread upon leather, and laid upon any place troubled with the gout, do presently give ease of the pains; and, applied

plied in the same manner, give ease to pained joints, and profit very much for running and moist ulcers, gangrenes, mortifications, and the like, for which it hath by often experience been found helpful.

CORAL - WORT.

IT is also called by some tooth-wort, toothed violet, dog-teeth violet, and dentaris.

DESCRIPTION. Of the many sorts of this herb, two of them may be found growing in this kingdom; the first of which shooteth forth one or two winged leaves upon long brownish footstalks, which are doubled down at their first coming out of the ground: when they are fully opened they consist of seven leaves, most commonly of a sad green colour, dented about the edges, set on both sides the middle rib one against another, as the leaves of the ash-tree; the stalk beareth no leaves on the lower half of it, the upper half beareth sometimes three or four, each consisting of five leaves, sometimes but of three; on the top stand four or five flowers upon short footstalks, with long husks; the flowers are very like the flowers of stock gilliflowers, of a pale purplish colour, consisting of four leaves apiece, after which come small cods which contain the seed: the root is very smooth, white, and shining; it doth not grow downwards, but creeping along under the upper crust of the ground, and consisteth of divers small round knobs set together: towards the top of the stalk there grow small single leaves, by each of which cometh a small round cloven bulb, which, when it is ripe, if it be set in the ground, will grow to be a root, and is esteemed a good way of cultivating the herb.

As for the other coral-wort which groweth in this nation, it is more scarce than this, and is a very small plant, not much unlike crow-foot, therefore some think it to be one of the sorts of crow-foot. I know not where to direct you to it, and therefore shall forbear the description.

PLACE. The first groweth near Mayfield in Suffex, in a wood called High-reed; and in another wood there also, called Fox-holes.

TIME. They flower from the latter end of April to the middle of May, and before the middle of July they are gone and not to be found.

GOVERNMENT AND VIRTUES. It is under the dominion of the Moon. It cleanseth the bladder and provoketh urine, expels gravel and the stone; it easeth pains in the sides and bowels; it is excellent good for inward wounds, especially such as are made in the breast or lungs, by taking a drachm of the powder of the root every

morning in wine; the same is excellent good for ruptures, as also to stop fluxes: an ointment made of it is excellent good for wounds and ulcers, for it soon dries up the watery humour which hinders the cure.

C O S T M A R Y.

CALLED also alecost, or balsam-herb.

This is so frequently known to be an inhabitant in almost every garden, that I suppose it needless to write a description thereof.

TIME. It flowereth in June and July.

GOVERNMENT AND VIRTUES. It is under the dominion of Jupiter. The ordinary costmary, as well as maudlin, provoketh urine abundantly, and moisteneth the hardness of the mother; it gently purgeth choler and phlegm, extenuating that which is gross, and cutting that which is tough and glutinous, cleanseth that which is foul, and hindereth putrefaction and corruption; it dissolveth without attraction, openeth obstructions, and healeth their evil effects, and is a wonderful help to all sorts of dry agues. It is astringent to the stomach, and strengtheneth the liver, and all the other inward parts, and if taken in whey worketh the more effectually. Taken fasting in the morning, it is very profitable for the pains of the head that are continual, and to stay, dry up, and consume, all thin rheums, or distillations from the head into the stomach, and helpeth much to digest raw humours that are gathered therein. It is very profitable for those that are fallen into a continual evil disposition of the whole body, called cachexia, being taken, especially in the beginning of the disease. It is an especial friend and help to evil, weak, and cold, livers. The seed is familiarly given to children for the worms, and so is the infusion of the flowers in white wine, given them to the quantity of two ounces at a time: it maketh an excellent salve to cleanse and heal old ulcers, being boiled with oil olive, and adder's tongue with it, and, after it is strained, to put in a little wax, rosin, and turpentine, to bring it into a convenient body.

C U D - W E E D.

BESIDES cud-weed, it is also called cotton-weed, chaff-weed, dwarf cotton, and petty cotton.

DESCRIPTION. The common cud-weed riseth up with one stalk, though sometimes two or three, thick set on all sides with small, long, and narrow, whitish or woody leaves, from the middle of the stalk almost up to the top; with every leaf standeth

standeth a small flower, of a dun or brownish yellow colour; in which herbs, after the flowers are fallen, come small seed wrapped up with the down therein, and is carried away with the wind. The root is small and thready.

There are other sorts hereof, which are somewhat less than the former, not much different, save only that the stalk and leaves are shorter, and that the flowers are paler, and more open.

PLACE. They grow in dry, barren, sandy, and gravelly, grounds, in most places of this land.

TIME. They flower about July, some earlier and some later, and their seed is ripe in August.

GOVERNMENT AND VIRTUES. Venus is lady of it. The plants are all astringent, or binding and drying, and therefore profitable for defluxions of rheum from the head, and to stay fluxes of blood wheresoever. The decoction being made into red wine and drunk, or the powder taken therein, also helpeth the bloody flux, and easeth the torments to come thereby, stayeth the immoderate courses of women, and is also good for inward or outward wounds, hurts, and bruises, and helpeth children both of burstings and the worms, and the disease called *teneismus*, (which is a frequent but vain provocation to stool,) being either drunk or injected. The green leaves, bruised and laid to any green wound, will stay the bleeding, and heal it up quickly; the decoction or juice thereof doth the same, and helpeth all old and filthy ulcers. The juice of the herb taken in wine and milk, is (as Pliny saith) a sovereign remedy against the quinsy; he further saith, that whosoever shall so take it shall never be troubled with that disease again. The tops of this plant, before it has reached its full growth, have the same virtue. I have seen it used only in one place. It is frequent in Charlton Forest, in Suffex, and was given with success for that almost incurable disease the chin-cough. Beat it up into a conserve, very fine, with a deal of sugar, and let the bigness of a pea be eaten at a time.

C O W S L I P S.

THEY are known also by the name of peagles.

Both the wild and garden cowslips are so well known, that I will neither trouble myself nor the reader with any description of them.

TIME. They flower in April and May.

GOVERNMENT AND VIRTUES. Venus lays claim to the herb as her own, and it is under the sign Aries, and our city-dames know well enough that the ointment or distilled

tilled water of it adds beauty, or at least restores it when it is lost. The flowers are held to be more effectual than the leaves, and the roots of little use. An ointment, being made with them, taketh away spots and wrinkles of the skin, sun-burning, and freckles, and adds beauty exceedingly; they remedy all infirmities of the head coming of heat and wind, as vertigo, ephialtes, false apparitions, phrenzies, falling sickness, palsies, convulsions, cramps, and pains in the nerves; the roots ease pains in the back and bladder, and open the passages of urine. The leaves are good in wounds, and the flowers take away trembling. If the flowers be not well dried and kept in a warm place, they will soon putrify and look green; have a special eye over them. If you let them see the sun once a month, it will do them no harm.

Because they strengthen the brain and nerves, and remedy the palsies, the Greeks gave them the name of *paralysis*. Of the flowers preserved, or conserved, the quantity of a nutmeg eaten every morning is a sufficient dose for inward diseases; but, for wounds, spots, wrinkles, and sun-burning, an ointment is made of the leaves and hog's grease.

C R A B S C L A W S.

CALLED also water-sengrene, knight's pond-water, water-houfleeck, pond-weed, and fresh-water foldier.

DESCRIPTION. It hath sundry long narrow leaves, with sharp prickles on the edges of them, also very sharp pointed; the stalks, which bear flowers, seldom grow so high as the leaves, bearing a forked head like a crab's claw, out of which comes a white flower, consisting of three leaves, with divers yellowish hairy threads in the middle: it taketh root in the mud in the bottom of the water.

PLACE. It groweth plentifully in the fens in Lincolnshire.

TIME. It flowers in June, and usually from thence till August.

GOVERNMENT AND VIRTUES. It is a plant under the dominion of Venus, and therefore a great strengthener of the reins; it is excellent good in that inflammation which is commonly called St. Anthony's fire; it assuageth all inflammations and swellings in wounds; and an ointment made of it is excellent good to heal them: there is scarce a better remedy growing than this for such as have bruised their kidneys, and thereby void blood by urine. A drachm of the powder of the herb taken every morning is a very good remedy to stop the terms.

B L A C K C R E S S E S.

DESCRIPTION. **THEY** have long leaves deeply cut and jagged on both sides, not much unlike wild mustard; the stalks are small, very limber though very tough; you may

may twist them round as you may a willow before they break. The flowers are very small and yellow, after which come small cods which contain the seed.

PLACE. It is a common herb, grows usually by the way-sides, and sometimes upon mud walls about London; but it delights most to grow among stones and rubbish.

TIME. It flowers in June and July, and the seed is ripe in August and September.

GOVERNMENT AND VIRTUES. It is under the dominion of Mars, and is a plant of a hot and biting nature: the truth is, the seed of black cresses strengthen the brain exceedingly, being in performing that office little inferior to mustard seed, if at all: they are excellent good to stay those rheums which fall down from the head upon the lungs. You may beat the seed into powder, and make it up into an electuary with honey, so have you an excellent remedy by you, not only for the premises, but also for the cough, yellow jaundice, and sciatica. The herb, boiled into a poultice, is an excellent remedy for inflammations both in women's breasts and in men's testicles.

SCIATICA CRESSES.

DESCRIPTION. THESE are of two kinds; the first riseth up with a round stalk about two feet high, spread into divers branches, whose lower leaves are somewhat larger than the upper, yet all of them cut or torn on the edges, somewhat like garden cresses, but smaller: the flowers are small and white, growing on the tops of the branches, where afterwards grow husks, with smallish brown seed therein, very strong and sharp in taste, more than the cresses of the garden. The root is long, white, and woody.

The other sort hath the lower leaves whole, somewhat long and broad, not torn at all, but only somewhat deeply dented about the edges toward the ends, but those that grow higher up are less. The flowers and seed are like the former, and so is the root likewise: and both root and seed as sharp as it.

PLACE. These grow by the way-sides in untilled places, and by the sides of old walls.

TIME. They flower in the end of June, and their seed is ripe in July.

GOVERNMENT AND VIRTUES. It is a Saturnine plant: the leaves, but especially the roots taken fresh in the summer time, beaten and made into a poultice or salve with old hog's grease, and applied to the places pained with the sciatica, to continue thereon four hours if it be on a man, and two hours on a woman, the place after-

wards bathed with wine and oil mixed together, and then wrapped with wool or skins after they have sweat a little, will assuredly cure not only the same disease in the hips, huckle-bone, or other of the joints, as gout in the hands or feet, but all other old griefs of the head (as inveterate rheums) and other parts of the body that are hard to be cured; and, if of the former griefs any parts remain, the same medicine after twenty days is to be applied again. The same is also effectual in the disease of the spleen; and, applied to the skin, it taketh away blemishes thereof, whether they be scars, leprosy, scabs, or scurf, which although it ulcerate the part, yet that is to be helped afterwards with a salve made of oil and wax. Esteem this a valuable secret. Cressies, either boiled or eaten in sallads, are very wholesome. For children's scabs or scalded heads, nothing is so effectual and quick a remedy as garden-cresses beat up with lard, for it makes the scales fall in twenty-four hours, and perfectly cures them if they continue the use of it.

W A T E R - C R E S S E S.

DESCRIPTION. OUR ordinary water-cresses spread forth with many weak, hollow, fappy, stalks, shooting out fibres at the joints, and upwards long winged leaves, made of sundry broad, fappy, and almost round, leaves, of a brownish green colour: the flowers are many and white, standing on long footstalks, after which come small yellow seed, contained in small long pods like horns: the whole plant abideth green in the winter, and tasteth somewhat hot and sharp.

PLACE. They grow for the most part in the small standing waters, yet sometimes in small rivulets of running water.

TIME. They flower and seed in the beginning of summer.

GOVERNMENT AND VIRTUES. It is an herb under the dominion of the Moon. It is more powerful against the scurvy, and to cleanse the blood and humours, than brooklime, and serves in all the other uses in which brooklime is available; as to break the stone, and provoke urine and women's courses. It is good for the female sex when troubled with the green sickness, and is a certain restorative of their lost colour if they use it in the following manner: Chop and boil them in the broth of meat, and eat them for a month together, morning, noon, and night. The decoction thereof cleanseth ulcers by washing them therewith; the leaves bruised, or the juice, is good to be applied to the face or other parts troubled with freckles, pimples, spots, or the like, at night, and washed away in the morning. The juice mixed with vinegar, and the fore part of the head bathed therewith, is very good for those that are dull and drowsy, or have the lethargy.

Water-

Water-cress pottage is a good remedy to cleanse the blood in the spring, and help head-achs, and consume the gross humours winter hath left behind; those who would live in health may make use of this; if any fancy not pottage, they may eat the herb as a salad.

CROSS-WORT.

DESCRIPTION. COMMON cross-wort groweth up with square hairy brown stalks little above a foot high, having four small, broad, and pointed, hairy, yet smooth, green leaves, growing at every joint, each against other crossways, which has caused the name. Toward the tops of the stalks at the joints, with the leaves, in three or four rows downward, stand small, pale, yellow, flowers, after which come small, blackish, round, seeds, four for the most part in every husk; the root is very small, and full of fibres or threads, taking good hold of the ground, and spreading with the branches a great deal of ground, which perish not in winter, although the leaves die every year, and spring again anew.

PLACE. It groweth in many moist grounds, as well meadows as untilled places about London, in Hampstead church-yard, at Wye in Kent, and sundry other places.

TIME. It flowereth from May all the summer long, in one place or another, as they are more open to the Sun; the seed ripeneth soon after.

GOVERNMENT AND VIRTUES. It is under the dominion of Saturn. This is a singular good wound-herb, and is used inwardly, not only to stay bleeding of wounds, but to consolidate them, as it doth outwardly any green wound, which it quickly drieth up and healeth. The decoction of the herb in wine, helpeth to expectorate phlegm out of the chest, and is good for obstructions in the breast, stomach, or bowels, and helpeth a decayed appetite. It is also good to wash any wound or sore with, to cleanse and heal it. The herb bruised and then boiled, and applied outwardly for certain days together, renewing it often, and in the mean time the decoction of the herb in wine taken inwardly every day, doth certainly cure the rupture in any, so as it be not too inveterate; but very speedily, if it be fresh and lately taken.

CROW-FOOT.

MANY are the names this furious biting herb hath obtained: it is called frog's foot from the Greek name *barrakion*, crow-foot, gold-knobs, gold-cups, king's-knob, bassiners, troil-flowers, polts, locket-goulions, and butter-flowers.

So abundant are the sorts of this herb, that to describe them all would tire the patience of Socrates himself; therefore I shall only mention the most usual.

DESCRIPTION. The most common crow-foot hath many dark green leaves, cut into divers parts, in taste biting and sharp, blistering the tongue; it bears many flowers, and those of a bright resplendent yellow colour. Virgins in ancient times used to make powder of them to furrow bride-beds. After the flowers come small heads, somewhat spiked and rugged like a pine-apple.

PLACE. They grow very common every-where; unless you turn your head into a hedge, you cannot but see them as you walk.

TIME. They flower in May and June, even till September.

GOVERNMENT AND VIRTUES. This fiery and hot-spirited herb of Mars is no way fit to be given inwardly; but an ointment of the leaves or flowers will draw a blister, and may be so fitly applied to the nape of the neck, to draw back rheum from the eyes. The herb being bruised, and mixed with a little mustard, draws a blister as well and as perfectly as cantharides, and with far less danger to the vessels of urine, which cantharides naturally delight to wrong. I knew the herb once applied to a pestilential rising that was fallen down, and it saved life even beyond hope; it were good keeping an ointment and plaister of it, if it were but for that.

C U C K O W - P O I N T .

IT is called alron, janus, and barba-arón, calves-foot, ramp, starch-wort, and wake-robin.

DESCRIPTION. This shooteth forth three, four, or five, leaves at the most, from one root, every one whereof is somewhat large and long, broad at the bottom, next the stalk, and forked, but ending in a point, without a cut on the edges, of a full green colour, each standing upon a thick round stalk, of a handful breadth long, or more, among which, after two or three months that they begin to wither, riseth up a bare, round, whitish, green, stalk, spotted and streaked with purple, somewhat higher than the leaves; at the top whereof standeth a long hollow house or husk, close at the bottom, but open from the middle upwards, ending in a point; in the middle whereof stands a small long pestle or clapper, smaller at the bottom than at the top, of a dark purple colour, as the husk is on the inside, though green without; which, after it hath so abided for some time, the husk with the clapper decayeth, and the foot or bottom thereof groweth to be a small long bunch of berries, green at the first,

and of a yellowish red colour when they are ripe, of the size of a hazel-nut kernel, which abideth thereon almost until winter; the root is round, and somewhat long, for the most part lying along, the leaves shooting forth at the bigger end, which, when it beareth its berries, are somewhat wrinkled and loose, another growing under it, which is solid and firm, with many small threads hanging thereat. The whole plant is of a very sharp biting taste, pricking the tongue as nettles do the hands, and so abideth for a great while without alteration. The root hereof was anciently used instead of starch to starch linen withal.

There is another sort of cuckow-point, with smaller leaves than the former, and sometimes harder, having blackish spots upon them, which, for the most part abide longer green in summer than the former, and both leaves and roots are more sharp and fierce than it; in all things else it is like the former.

PLACE. These two sorts grow frequently almost under every hedge-side in many places of this land.

TIME. They shoot forth leaves in the spring, and continue only until the middle of summer, or somewhat later; their husks appearing before they fall away, and their fruit shewing in April.

GOVERNMENT AND VIRTUES. It is under the dominion of Mars. *Tragus* reporteth, that a drachm weight, or more if need be, of the spotted wake-robin, either fresh and green or dried, being eaten or taken, is a most present and sure remedy for poison and the plague. The juice of the herb taken to the quantity of a spoonful hath the same effect; but if there be a little vinegar added thereunto, as well as unto the root aforesaid, it somewhat allayeth the sharp biting taste thereof upon the tongue. The green leaves bruised, and laid upon any boil or plague-fore, do very wonderfully help to draw forth the poison. A drachm of the powder of the dried root taken with twice as much sugar, in the form of a licking electuary, or the green root, doth wonderfully help those that are purfy or short-winded, as also those that have a cough; it breaketh, digesteth, and riddeth away, phlegm from the stomach, chest, and lungs; the milk, wherein the root hath been boiled, is effectual also for the same purpose. The said powder, taken in wine or other drink, or the juice of the berries, or the powder of them, or the wine wherein they have been boiled, provoketh urine, and bringeth down women's courses, and purgeth them effectually after child-bearing, to bring away the after-birth: taken with sheep's milk, it healeth the inward ulcers of the bowels. The distilled water hereof is effectual to all the purposes aforesaid. A spoonful taken at a time healeth the itch; and an ounce or more, taken at a time for some days together, doth help the rupture; the leaves, either green or dry, or the juice of them, do cleanse all manner of rotten and filthy ulcers, in what part of the body soever, and healeth the stinking sores in the nose, called polypus.

The water wherein the root hath been boiled, dropped into the eyes, cleanseth them from any film or skin, cloud or mist, which begins to hinder the sight, and helpeth the watering and redness of them; or when by accident they become black and blue. The root mixed with bean-flour, and applied to the throat or jaws that are inflamed, helpeth them; the juice of the berries boiled in oil of roses, or beaten into powder mixed with the oil, and dropped into the ears, easeth pains in them: the berries or the roots, beaten with hot ox-dung and applied, ease the pains of the gout: the leaves and roots boiled in wine with a little oil, and applied to the piles, or the falling down of the fundament, ease them, and so doth sitting over the hot fumes thereof: the fresh roots bruised, and distilled with a little milk, yield a most sovereign water to cleanse the skin from scurf, freckles, spots, or blemishes whatsoever. The country people about Maidstone in Kent use the herb and root instead of soap.

C U C U M B E R S.

ACCORDING to the pronunciation of the vulgar, cowcumbers.

GOVERNMENT AND VIRTUES. There is no dispute to be made, but that they are under the dominion of the Moon, though they are so much rejected for their coldness; it is by some affirmed, that if they were but one degree colder they would be poison. The best of Galenists hold them to be cold and moist but in the second degree, and then not so hot as lettuce or purslain: they are excellent good for hot stomachs and livers; the immeasurable use of them fills the body full of raw humours, and so indeed does any thing else when used to an excess. The juice of cucumbers, the face being washed with it, cleanseth the skin, and is excellent good for hot rheums in the eyes; the seed is excellent to provoke urine, and cleanse the passages thereof when they are stopped; neither do I think there is a better remedy for ulcers in the bladder than cucumbers; the usual course is to use the seeds in emulsions, as they make almond-milk, but a better way by far (in my opinion) is this: when the season of the year is, take the cucumbers and bruise them well, and distil the water from them, and let such as are troubled with ulcers in their bladders drink no other drink. The face being washed with the same water, be it never so red, will be benefited by it, and the complexion very much improved. It is also excellent good for sun-burning, freckles, and morpew.

C U B E B S.

CUBEBS are small berries, somewhat sweet, about the bigness of pepper-corns, yet not so black nor solid, but more rugged or crested, being either hollow, or having a kernel within it, of a hot taste, but not so fiery as pepper; and having each a short stalk on them like a tail: these grow on trees less than apple-trees, with leaves

narrower than those of pepper; the flower is sweet, and the fruit groweth clustering together. The Arabians call them *quabebe*, and *quabebe chini*: they grow plentifully in Java; they are used to stir up venery, and to warm and strengthen the stomach, being overcome with phlegm or wind, they cleanse the breast of thick tough humours, help the spleen, and are very profitable for the cold griefs of the womb. Being chewed in the mouth with mastic, they draw rheum from the head, and strengthen the brain and memory.

RED, WHITE, AND BLACK, CURRANTS.

NAMES. THE Latin names for currants are *ribes*, and *ribes fructu rubro* the red currant, *albo* white, and *nigro* black.

DESCRIPTION. The red currant-bush hath a stalk covered with a thin brownish bark outwards, and greenish underneath; the leaves are of a blackish green, cut on the edges into five parts, much like a vine-leaf, but smaller; the flowers come forth at the joints of the leaves, many together on a long stalk, hanging down about a finger's length; of an herby colour, after which come round berries, green at the first, but red when they are ripe: of a pleasant tart taste, wherein is small seed; the root is woody and spreading.

There is another sort thereof, whose berries are twice as large as the former, and of a better relish.

The white currant tree hath a taller and straighter stem than the red, a whiter bark, and smaller leaves, but hath such-like berries upon long stalks, of the same bigness as the first, but of a shining transparent whiteness, and of a more pleasant taste than the former.

The black currant riseth higher than the last, and is thicker set with branches round about, and more pliant, the younger covered with a pale, and the elder with a browner, bark; the leaves are smaller than those of the former, and often with fewer cuts therein: the flowers are alike, but of a greenish purple colour, which produce small black berries; the leaves and fruit have an unpleasant smell, but yet are wholesome, though not pleasant.

PLACE. All these sorts of currants grow plentifully in England, in gardens where they are planted; they have been found growing naturally wild in Savoy in Switzerland, as Gesner saith; and some in Austria, saith Claudius: they grow in great abundance in Candia, and other places in the Streights, from whence in great quantities they are brought dried unto us.

TIME. They flower and bear fruit in June, July, and August.

GOVERNMENT AND VIRTUES. Currants are under the influence of the benevolent planet Venus; they are of a moist, temperate, refreshing, nature; the red and white

currants

currants are good to cool and refresh faintings of the stomach, to quench thirst, and stir up an appetite, and therefore are profitable in hot and sharp agues: it tempereth the heat of the liver and blood, and the sharpness of choler, and resisteth putrefaction; it also taketh away the loathing of meat, and weakness of the stomach by much vomiting, and is good for those that have any looseness of the belly; Gefner saith that the Switzers use them for the cough, and so well they may; for, take dry currants a quarter of a pound, of brandy half a pint, set the brandy on fire, then bruise the currants and put them into the brandy while it is burning, stirring them until the brandy is almost consumed, that it becomes like unto an electuary, and it is an excellent remedy to be taken hot for any violent cough, cold, or rheum. The black currants and the leaves are used in sauces by those who like the taste and scent of them; which I believe very few do of either.

C O C O A - N U T T R E E.

DESCRIPTION AND NAMES. THIS groweth to be a large timber-tree, the body covered with a smooth bark, bare or naked, without any branch, to a great height, (for which cause the Indians do either bore holes therein, at certain distances, and knock strong pegs into them, which stick out so far as may serve for footing to get up into the tree, to gather the juice or liquor, and the fruit; or fasten ropes with nails round about the tree, with spaces which serve as steps to go up into it;) and towards the top it spreadeth out into sundry great arms, which bow themselves almost round; with large leaves on them like the date-tree leaf, but larger, whose middle rib is very great, and abiding always green, and with fruit also, continually one succeeding another: from between the lower boughs come forth smaller stalks, hanging down, and bearing sundry flowers on them, like those of the chestnut-tree; after which come large three-square fruit or nuts, ten or twelve, and sometimes twenty, thereon together, as big as one's head, or as a smaller pompion, almost round, but a little smaller at the end, covered with a hard, tough, ash-coloured, thick, bark, an inch thick in some places, and within it a hard, woody, brownish, shell, but black when polished; having at the head or top thereof three holes, somewhat resembling the nose and eyes of a monkey; between which outer bark and this shell grow many gross threads or hairs; within the wooden shell there is a white kernel cleaving close to the side thereof, as sweet as an almond, with a fine sweet water in the middle thereof, as pleasant as milk, which will grow less pleasant, or consume, either by over ripeness or long keeping. This tree is called by the Indians *maro*, in Malacca *trican*, and in other places by several other appellations. The timber of this tree is solid and firm, black and shining, like the walnut-tree, and fit for any building; and Garcias saith,

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it is of two sorts, (I suppose he meaneth for two uses,) the one to bear fruit, the other to extract the liquor which issues therefrom, when the branches are cut, or when it is bored, and received into some things tied thereunto for that purpose, which liquor they call in their language *sura*; and it sheweth like unto troubled wine, but in tastelike new sweet wine, which being boiled they call *orraque*; and being distilled it yieldeth a spirit like unto our aqua vitæ, and it is used for the same purposes as we do ours, and will burn like it: they call it *fula*, and being set in the sun it will become good vinegar, and that which runneth last, being set in the sun to grow hard, or boiled to hardness, will become sugar, which they call *jagra*. Of the inner kernel, while it is fresh, they make bread; the fresher the nuts are, the sweeter is the meat thereof.

GOVERNMENT AND VIRTUES. This is a solar plant; the fruit or kernel of the cocoa-nut doth nourish very much, and is good for lean bodies; they increase the natural feed, and stir up the appetite to venery, and are good to mollify the hoarseness of the throat and voice.

C O F F E E.

THIS is reported to be the berries of certain shrubs or bushes growing in Arabia, and from thence into Turkey, and other parts. It is said of itself to be insipid, having neither scent nor taste; but, being pounded and baked, as they do prepare it to make the coffee-liquor with, it then stinks most loathsomely, which is an argument of some Saturnine quality in it: the propugners for this filthy drink affirm that it causeth watchfulness; (so doth the stinking hemlock and henbane in their first operation if unhappily taken into the body, but their worse effects soon follow;) they also say it makes them sober when they are drunk; yet they would be always accounted sober persons, or at least think themselves so, when they can but once sit down in a coffee-house; certainly, if there had been any worth in it, some of the antient Arabian physicians, or others near those parts, would have recorded it; but there is no mention made of any medicinal use thereof, by any author, either antient or modern; neither can it be indued with any such properties as the indulgers of it feed their fancy with; but this I may truly say of it, *Quod Anglorum corpora, quæ huic liquori tantopere indulgent, in barbarorum naturam degenerasse videntur.*

C Y P R E S S - T R E E.

NAMES. It hath no other name in English, but this tree is called *cupressus* in Latin; and the nuts or fruit thereof, *nucæ cupressi*; in English, cypress-nuts.

No. II.

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DESCRIP-

DESCRIPTION. The cypress-tree hath a thick, straight, long, stem; upon which grow many slender branches; which do not spread abroad, but grow up in length towards the top, so that the cypress-tree is not broad, but narrow, growing to a great height; the bark of the cypress-tree is brown, the timber yellowish, hard, thick, and close, and when it is dry of a pleasant smell, especially if it be set near the fire. The cypress-tree hath no particular leaves, but the branches, instead of leaves, bring forth short twigs, cut and snipped in many places, as if they were set about with many small leaves; the fruit is round, almost as big as a prune or plumb, which being ripe doth open in divers places, and hath in it a flat greyish seed.

PLACE. The cypress-tree delights in dry, hilly, and mountainous, places, in hot countries.

TIME. The cypress-tree is always green; the fruit is ripe in September, at the beginning of winter.

GOVERNMENT AND VIRTUES. Saturn rules this plant, the leaves and fruit are dry in the third degree, without any manifest heat, and very astringent; the fruit of cypress, taken into the body, stoppeth looseness and the bloody-flux, and is good against spitting of blood, and all other issues of blood; the decoction of the same, made with water, hath the same virtue. The oil, in which the fruit or leaves of cypress have been boiled, doth strengthen the stomach, stayeth vomiting, stoppeth the belly, and all fluxes of the same, and cureth the excoriation or going off the skin from the secret members. Cypress-nuts cure those who are bursten and that have their bowels fallen into the scrotum, being outwardly applied in cataplasms thereto; the leaves have the same virtue, but not so strong; the fruit of cypress is also good to cure the polypus, which is corrupt flesh growing in the nose. The same, bruised with dry figs, doth cure the blasting and swelling of the yard and stones; and, if leaven be added thereto, it dissolveth and wasteth blotches and boils, being laid upon the grieved place. The leaves of cypress, boiled in sweet wine or mede, help the stranguary, and issue of the bladder; the same, beaten very small and applied, close up green wounds, and stop the bleeding thereof; and, being applied with parched barley-meal, they are profitable against St. Anthony's fire, carbuncles, and other hot ulcers, and fretting sores; the leaves and fruit of cypress, being infused in vinegar, and the hair washed therewith, make it black.

CEDAR - TREE:

NAMES. There are two kinds hereof, the great cedar-tree and the small cedar; out of the great tree issueth a white rosin, called in Latin *cedria*, and *liquor cedrinus*, or liquor of cedar.

DESCRIP-

DESCRIPTION. The greater cedar groweth very tall, high, great, and thick; the bark from the foot of the stem unto the first branches is rough, and from thence up to the top it is smooth and plain, of a dark blue colour, out of which there droppeth white rosin of its own kind, which is moist, odoriferous, or of a sweet smell, and by the heat of the sun it becomes dry and hard; the limbs and branches of this tree are long, and parted into many other small branches, standing directly one against another, like those of the fir-tree; the said branches are garnished with many small leaves, thick and short, having a sweet savour; the fruit is like that of the fir-tree, but larger, thicker, and harder; the whole tree groweth straight up like the fir-tree.

Of the smaller cedar there are two kinds; the first kind of small cedar is much like to juniper, but somewhat smaller, the stem is crooked or writhed, and covered with a rough bark; the fruit is round berries, like juniper-berries, but somewhat greater of colour; at the first green, then yellow, and at last reddish, and of an indifferent good taste.

The second kind of small cedar groweth not high; but remaineth small and low, like the other; the leaves of this are not prickly, but somewhat round and mossy at the ends, almost like the leaves of tamarisk and savin; the fruit of this kind beareth also round berries, which at first are green, afterwards yellow, and, when they are ripe, they become reddish, and are bitter in taste.

PLACE. The great cedar groweth in Africa and Syria, and upon the mountains of Libanus, Amanus, and Taurus.

The second kind groweth in Phœnicia, and in certain places of Italy, in Calabria, and also in Languedoc.

The third kind groweth in Lycia, and is found in certain parts of France, as in Provence and Languedoc.

TIME. The great cedar perfecteth its fruit in two years, and it is never without fruit, which is ripe at the beginning of winter. The small cedar-trees are always green, and loaded with fruit, having at all times upon them fruit both ripe and unripe; as hath juniper.

GOVERNMENT AND VIRTUES. The great cedar is under the dominion of the Sun, the smaller of Mars; the cedar is hot and dry in the third degree; the rosin or liquor *cedria*, which runneth forth of the great cedar-tree, is hot and dry almost in the fourth degree, and of subtil parts.

The fruit of the small cedar is also hot and dry, but more moderately; *cedria*, that is, the liquor or gum of cedar, assuageth the tooth-ach, being put into the hollowness of the same; also, it cleareth the sight, and taketh away spots and scars of the eyes, being laid thereon; the same, dropped into the ears, with vinegar, killeth the

worms of the same; and, with the wine of the decoction of hyssop, it cureth the noise and ringing in the ears, and makes the hearing good.

The ancient Egyptians did use, in times past, to preserve their dead bodies with this *cedria*, for it keepeth the same whole, and preserveth them from corruption, but it consumeth and corrupteth living flesh; it killeth lice, moths, worms, and all such vermin, so that they will not come near it.

The fruit of the cedar is good to be eaten against the stranguary; it provokes urine, and brings down women's courses.

C I S T U S.

KINDS AND NAMES. OF this there are two sorts, the first called *cistus non ladanifera*, because it beareth no ladanum; the other is a plant of a woody substance, upon which is found that fat liquor or gum, called ladanum.

The first kind, which yieldeth no ladanum, is also of two sorts, viz. male and female.

The male beareth red flowers, the female white, in all things else the one is like the other; out of the root of the female cistus is drawn forth a sap or liquor called hippocistis.

The second kind of cistus is called also *ledum* and *ladum*; the fat liquor which is gathered from it is called ladanum, and in shops lapdanum.

DESCRIPTION. The first kind of cistus, which beareth no ladanum, hath round hairy stalks, and stems with knotted joints, and full of branches; the leaves are roundish, and covered with a cotton or soft hair, not much unlike the leaves of sage, but shorter and rounder; the flowers grow at the tops of the stalks, of the fashion of a single rose, whereof the male kind is of colour red, and the female white; at the last they change into knops, or husks, wherein the seed is contained.

There is found a certain excrescence or out-growing, about the root of this plant, which is of colour sometimes yellow, sometimes white, and sometimes green; out of which is artificially drawn a certain juice, which, in shops is called hypocistis, and is used in medicine.

The second kind of cistus, which is also called *ledum*, is a plant of a woody substance, growing like a little tree or shrub, with soft leaves, in figure not much unlike the others, but longer and browner; upon the leaves of this plant is found that fat substance called ladanum, which is generally about midsummer and the hottest days.

PLACE. The first kind of cistus groweth in Italy, Sicily, Candia, Cyprus, Languedoc, and other hot countries, in rough and untilled places.

The second kind groweth also in Crete, Cyprus, and Languedoc.

TIME. The first kind of cistus flowereth in June, and sometimes sooner.

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The second kind of cistus flowereth and bringeth forth seed in the spring time, and immediately after the leaves fall off, and about midsummer new leaves rise up; upon which leaves, in the hottest days, is found a certain fatness which is diligently gathered and dried, and makes that gum which is called lapdanum.

GOVERNMENT AND VIRTUES. These plants are governed by Jupiter; the flowers and leaves of cistus are dry in the second degree, and somewhat astringent; that which groweth about the roots is of like temperature, but more astringent; lapdanum is hot in the second degree almost, and is somewhat dry and astringent. The flowers of cistus, boiled in wine and drunk, stop the lask, and all issues of blood; and dry up superfluous moisture, as well of the stomach as other parts of the belly; the leaves do cure and heal green wounds, being laid thereupon. Hypocistis stoppeth all fluxes of the belly, and is of a stronger operation than the flowers and leaves of cistus; wherefore it cureth the bloody flux, and the immoderate overflowing of women's courses. Ladanium drunk with old wine stoppeth the lask and provoketh urine; it is very good against the hardness of the matrix or mother, used in manner of a pessary; it draweth down the secundine or after-birth, when it is laid upon quick coals, and the fumigation or smoke thereof received up into the matrix; the same applied to the head with myrrh, or oil of myrrh, cureth the scurf thereof, and keepeth the hair from falling off; if it be dropped into the ears, with honied water or oil of roses, it healeth pains in the ears. It taketh away the scars of wounds, being applied thereunto with wine; it is also very profitably mixed with all unguents and plasters that serve to heat, moisten, and assuage pains; and for such as are laid to the breast against the cough.

C O C K L E.

NAMES. It is called also nigel-weed, and field-nigella.

DESCRIPTION. It hath straight, slender, hairy, stems; the leaves are also long, narrow, hairy, and greyish; the flowers are of a brown purple colour, changing towards red, divided into five small leaves, not much differing from the proportion of wild campions; after which there groweth round cups, wherein is contained plenty of seed, of a black brown colour.

PLACE. It is too frequent amongst corn, wheat, rye, and barley.

TIME. It flowers in May, June, and July.

GOVERNMENT AND VIRTUES. This unprofitable guest amongst corn is of a Saturnine quality, causeth giddiness of the head, and stupifies if it gets amongst the corn to be made with it into bread, and, howsoever taken, it is dangerous and hurtful; although some ignorant persons have mistaken it for the right nigella, or used it instead of yuray or darnel, to the great danger of the patient.

CORIANDER.

NAMES. IT is called in shops *coriandrum*, in English coriander, and in some counties colyander.

DESCRIPTION. This is a stinking plant; it beareth a round stalk, full of branches, each about a foot and a half long; the leaves are whitish, all jagged and cut; the under leaves, that spring up first, are almost like the leaves of chervil or parsley, and the upper leaves are not much unlike the same, or rather like to fumitory leaves, but a great deal tenderer, and more jagged; the flowers are white, and grow in round tufts; the seed is all round, and hollow within, and of a very pleasant scent when it is dry; the root is hard, and of a woody substance.

PLACE. It is sown in gardens, and loveth a good soil.

TIME. It flowereth in July and August, and the seed is ripe shortly after.

GOVERNMENT AND VIRTUES. The green plant is cold and dry, of a Saturnine quality, hurtful to the body; but the sweet savouring seed is of a warm temperature, and useful for many purposes; the seed of coriander, being prepared, and taken alone, or covered with sugar, after meals, closeth up the mouth of the stomach, stayeth vomiting and helpeth digestion; the same roasted or parched, and drunk in wine, killeth and bringeth forth worms out of the body, and stoppeth the lask and bloody flux, and all other extraordinary issues of blood. Coriander ought not to be covered with sugar, or to be put into any meat or medicine, nor used any way unprepared: the way of preparing it is after this manner, viz. Take of the seed of coriander well dried, and pour thereupon good strong wine and vinegar mixed together, and so leave them to steep for the space of four and twenty hours; then take the seeds out of the liquor and dry them, and so keep them to be used in medicine. The green herb coriander, being boiled with crumbs of white bread, or barley-meal, consumeth and driveth away hot tumours, swellings, and inflammations; and, with bean-meal, it dissolveth the king's evil, hard knobs, &c. The juice applied with ceruse, litharge of silver, vinegar, and oil of roses, cureth St. Anthony's fire, and assuageth and easeth the pains of all inflammations.

COLOQUINTIDA.

NAME. IT is also called wild bitter gourd, and the fruit coloquint-apple:

DESCRIPTION. Coloquintida creepeth with its branches along by the ground, with rough hairy leaves, of a greyish colour, much cloven or cut; the flowers are bleak or pale; the fruit round, of a green colour at the beginning, and afterwards yellow; the bark thereof is neither thick nor hard, the inner part of the pulp is open and
spongy,

spongy, full of grey seed, in taste very bitter; the which is dried and kept for medicinal use.

PLACE. Coloquintida groweth in Italy and Spain, from which places the dried fruit is brought unto us.

TIME. Coloquintida bringeth forth its fruit in September.

NATURE AND VIRTUES. It is under the planetary influence of Mars; of temperature hot and dry in the third degree; the white or inward pith or pulp of the apple, taken about the weight of a scruple, openeth the belly mightily, and purgeth gross phlegm and cholic humours, and cleanseth the guts of slimy filthiness and stinking corruption, which oftentimes sticketh about them, and causeth those grievous pains, gripings, and rumbling, of the belly; but, if taken in too great a quantity, it causeth blood to come forth. The like virtue it hath if it be boiled, or laid to soak in horned water, or any other liquor, and afterward given to be drunk; it profiteth much against cold dangerous sicknesses, giddiness of the head, pain to fetch breath, the cholic, looseness of the sinews, and places out of joint; for all the same purposes, it may be put into glysters and suppositories that are put into the fundament; the oil wherein coloquintida hath been boiled, being dropped into the ears, easeth the pain and ringing thereof.

Coloquintida, if administered by an unskilful hand, is very dangerous and hurtful to the stomach and liver, and troubleth the bowels and entrails; for remedy, you must put to the pulp or pith of coloquintida, gum-tragacanth and mastic, and afterwards make it into troches or balls with honey.

CORNEL-TREE.

NAMES. IT is called of some, long cherry, or long cherry-tree.

DESCRIPTION. The cornel-tree sometimes groweth up to a reasonable bigness, like other trees, and sometimes it is but low, and groweth like to a shrub or hedge-bush, as divers other small trees do; the wood or timber of this tree is very hard; the flowers are of a faint yellowish colour, the fruit is very red, and somewhat long, almost like an olive, but smaller, with a long little stone or kernel inclosed therein, like the stone of an olive-berry.

PLACE. The cornel-tree is in this country to be found no where but in gardens and orchards, where it is planted.

GOVERNMENT AND VIRTUES. It cureth the falling sickness, and gripings in the belly or bowels; it expelleth wind from the stomach and entrails, helpeth such as are bruised or broken by falls, &c. those that have loose or weak sinews, and pains of the sciatica or hip-gout; and used with vinegar it is good against scabs, and is an ingredient in many of our compositions and cordial antidotes.

CAROB.

CAROB - TREE.

NAMES. IT is called in shops, *xylocaralla*, carob, and carobs.

DESCRIPTION. This fruit groweth upon a great tree, whose branches are small and covered with a red bark; the leaves are long, and spread abroad after the manner of ashen leaves, consisting of six or seven small leaves growing by a rib, one against another, of a sad dark green colour above, and of a light green underneath; the fruit is in certain crooked cods or husks, sometimes of a foot and a half long, and as broad as one's thumb; sweet in taste; in the husk is contained seed, which is large, plain, and of a chestnut colour.

PLACE. This plant grows in Spain, Italy, and other hot countries.

GOVERNMENT AND VIRTUES. The fruit of the carob-tree is somewhat hot and dry, and astringent, especially when it is fresh and green; somewhat subject to the influence of Saturn: the fresh and green carobs do gently loose the belly, but are somewhat hard of digestion, and, if eaten in great quantity, hurtful to the stomach; but being dried they stop fluxes of the belly, provoke urine, and are not prejudicial to the stomach, being much better to be eaten dry than when fresh gathered or green.

CASSIA - FISTULA.

NAMES. IT is called cassia in the cane, but is usually known by the general name of cassia-fistula in most countries.

DESCRIPTION. The tree which beareth the canes hath leaves not much unlike those of the ash-tree; they are great, long, and spread abroad; made of many leaves growing one against another, along by one stem; the fruit is round, long, black, and with woodish husks or cods, most commonly two feet long, and as thick as one's thumb; severed or parted in the inside into divers small cells or chambers, wherein lieth flat and brownish seed, laid together with the pulp, which is black, soft, and sweet, and is called the flour, marrow, or cream, of cassia, and is very useful and profitable in medicine.

PLACE. It groweth in Syria, Arabia, and the East-Indies; and in the West, as Jamaica.

GOVERNMENT AND VIRTUES. The black pulp, or moist substance, of cassia, is of a gentle temperature, moderately hot and moist in the first degree, and under the government of Venus; the inner pulp of cassia is a sweet and pleasant medicine, and may safely be given to all weak people, women with child, and young children. It looseneth the belly gently, and moderately purgeth cholic humours and slimy phlegm gathered about the lungs, to be taken the quantity of an ounce at a time.

Cassia

Cassia is excellent good for those who are troubled with hot agues, the pleurisy, jaundice, or any inflammation of the liver; especially being mixed with waters, drinks, or herbs, that are of a cooling nature. It is good to cleanse the reins and kidneys, it driveth forth gravel and the stone, and is a preservative against the stone if drunk in the decoction of liquorice, and parsley-roots, or ciches. It is good to gargle with cassia, to assuage and mitigate swellings of the throat, and to dissolve, ripen, and break, imposthumes and tumours.

Avicen writeth, that cassia, being applied to the part grieved with the gout, assuageth the pain.

C O R A L:

KINDS AND NAMES. THERE are several kinds of coral, but the red and the white, especially the red, are most in use. There are also several sorts of black coral, called *antipathes*; and there is a kind of coral which is black, rough, and bristly, and is called *samoggia*.

DESCRIPTION. These plants, although their hard substance make them seem rather to be stones, yet they are vegetables. The great red coral, which is the best, groweth upon rocks in the sea, like unto a shrub, with arms and branches, which shoot forth into sprigs, some large and some small, of a pale red colour, for the most part, when it is taken out of the water; but when it is polished it is very fair, and of a beautiful red colour; whilst it is in the water it is soft and pliable, but, being taken out, and kept dry a while, it becomes of a hard stoney substance.

PLACE. The corals are found in the isles of Sardinia, and divers other places.

D A I S I E S.

THESE are so well known to almost every child, that I suppose it is altogether needless to write any description of them. Take therefore the virtues of them as followeth.

GOVERNMENT AND VIRTUES. The herb is under the sign Cancer, and under the dominion of Venus; and therefore excellent good for wounds in the breast, and very fitting to be kept both in oils, ointments, and plasters; as also in syrup. The greater wild daisy is a wound-herb of good respect, often used in those drinks or salves that are for wounds, either inward or outward; the juice or distilled water of these, or the small daisies, doth much temper the heat of choler, and refresheth the liver and other inward parts. A decoction made of them, and drunk, helpeth to cure the wounds made in the hollownes of the breast; the same also cureth all ulcers and pustules in the mouth or tongue, or in the secret parts. The leaves bruised and applied to the

testicles, or to any other parts, that are swollen and hot, dissolve the swelling and temper the heat. A decoction made hereof with walwort and agrimony, and the places fomented or bathed therewith warm, giveth great ease to those who are troubled with the palsy, sciatica, or gout; the same also disperseth and dissolveth the knots or kernels that grow in the flesh of any part of the body, and the bruises and hurts that come by falls and blows; they are also used for ruptures and other inward burnings, with very good success. An ointment made hereof, doth wonderfully help all wounds that have inflammations about them, or, by reason of moist humours having access unto them, are kept long from healing; and such are those for the most part, that happen to the joints of the arms and legs. The juice of them, dropped into the running eyes of any, doth much help them.

D A N D E L I O N.

VULGARLY called piss-a-beds.

DESCRIPTION. It is well known to have many long and deeply gashed leaves lying on the ground, round about the head of the root, the ends of each gash or jag on both sides looking down towards the root, the middle rib being white, which, broken, yieldeth abundance of bitter milk, but the root much more. From among the leaves, which always abide green, arise many slender, weak, naked, footstalks, every one of them bearing at the top one large yellow flower, consisting of many rows of yellow leaves, broad at the points, and nicked in, with a deep spot of yellow in the middle; which growing ripe, the green husk wherein the flower stood turneth itself down to the stalk, and the head of down becometh as round as a ball, with long reddish seed underneath, bearing a part of the down on the head of every one, which together is blown away with the wind, or may at once be blown away with one's mouth. The root groweth downwards exceeding deep; which, being broken off within the ground, will notwithstanding, shoot forth again; and will hardly be destroyed when it hath once taken deep root in the ground.

PLACE. It groweth frequently in all meadows and pasture-grounds.

TIME. It flowereth in one place or other almost all the year long.

GOVERNMENT AND VIRTUES. It is under the dominion of Venus. It is of an opening and cleansing quality, and therefore very effectual for the obstructions of the liver, gall, and spleen, and the diseases that arise from them, as the jaundice, and hypochondriacal passion. It wonderfully openeth the passages of urine, both in young and old; it powerfully cleanseth aposthumes, and inward tumours in the urinary passages, and, by the drying and temperate quality, doth afterwards heal them; for which purpose the decoction of the roots or leaves in white wine, or the leaves

chopped as pot-herbs with a few alifanders, and boiled in their broth, is very effectual. And whoever is drawing towards consumption, or an evil disposition of the whole body, called *cachexia*, by the use hereof for some time together will find a wonderful help. It helpeth also to procure rest and sleep to bodies distempered by the heat of ague-fits, or otherwise; the distilled water is effectual to drink in peffilential fevers, and to wash the fores.

You see here what virtues this common herb hath, and that is the reason the French and Dutch so often eat them in the spring; and now, if you look a little further, you may plainly perceive that foreign physicians are more liberal in communicating their knowledge of the virtues of plants than the English.

D A R N E L.

IT is also called juray, and wray; in Suffex they call it crop, it being a pestilent enemy amongst corn.

DESCRIPTION. This hath, all the winter, sundry long, fat, and rough, leaves, which, when the stalk riseth, (which is slender and jointed,) are narrower, but still rough; on the top groweth a long spike, composed of many heads, set one above another, containing two or three husks, with sharp but short beards, or hawns, at the ends; the seed is easily shaken out of the ears, the husk itself being somewhat tough.

PLACE. The husbandmen know this too well to grow among their corn, or in the borders and pathways of fields that are fallow.

GOVERNMENT AND VIRTUES. It is a malicious plant of fullen Saturn. As it is not without some vices, so hath it also many virtues. The meal of darnel is very good to stay gangrenes, and other such-like fretting and eating cankers, and putrid fores; it also cleanseth the skin of all leprogies, morphews, ringworms, and the like, if it be used with salt and raddish-roots. Being used with quick brimstone and vinegar, it dissolveth knots and kernels, and breaketh those that are hard to be dissolved, being boiled in wine with pigeon's dung and linseed; a decoction thereof made with water and honey, and the place bathed therewith, is profitable for the sciatica. Darnel-meal applied in a poultice, draweth forth splinters and broken bones from the flesh; the red darnel boiled in red wine, and taken, stayeth the lask and all other fluxes, and women's bloody issues; and restraineth urine that passeth away too suddenly.

D I L L.

DESCRIPTION. THE common dill groweth up with seldom more than one stalk, neither so high nor so great, usually, as fennel, being round, and with fewer joints thereon.

thereon; whose leaves are sadder, and somewhat long, and so like fennel, that it deceiveth many, but harder in handling, and somewhat thicker, and of a stronger unpleasant smell; the tops of the stalks have four branches, and smaller umbels of yellow flowers, which turn into small seed somewhat flatter and thinner than fennel seed. The root is somewhat small and woody, perishing every year after it hath borne seed; and is also unprofitable, being never put to any use.

PLACE. It is most usually sown in gardens, and grounds for that purpose, and is also found wild with us in some places.

GOVERNMENT AND VIRTUES. Mercury hath the dominion of the plant, and therefore to be sure it strengthens the brain. The dill, being boiled, and drunk, is good to ease swellings and pains; it also stayeth the belly and stomach from casting; the decoction thereof helpeth women that are troubled with the pains and windiness of the mother, if they sit therein. It stayeth the hiccough, being boiled in wine, and only smelled to, being tied in a cloth. The seed is of more use than the leaves, and more effectual to digest raw and viscous humours, and is used in medicines that serve to expel wind, and the pains proceeding therefrom. The seed being toasted or fried, and used in oils and plaisters, dissolveth imposthumes in the fundament, and drieth up all moist ulcers, especially in the secret parts. The oil made of dill is effectual to warm, to dissolve humours and imposthumes, to ease pains, and to procure rest. The decoction of dill, be it herb or seed, (only if you boil the seed, you, must bruise it,) in white wine, being drunk, is an excellent remedy to expel wind, and also to provoke the terms.

DEVIL'S BIT.

DESCRIPTION. THIS riseth up with a round, green, smooth, stalk, about two feet high, set with divers long, and somewhat narrow, smooth, dark-green, leaves, somewhat snipt about the edges, for the most part; being else all whole, and not divided at all, or but very seldom, even to the tops of the branches, which yet are smaller than those below, with one rib only in the middle; at the end of each branch standeth a round head of many flowers set together in the same manner, or more neatly than the scabious, and of a more bluish purple colour; which, being past, there followeth seed that falleth away. The root is somewhat thick, but short and blackish, with many strings, abiding after seed-time many years. There are two other sorts hereof, in nothing unlike the former, save that one beareth white, and the other bluish-coloured, flowers.

PLACE. The first groweth as well in dry meadows and fields, as moist, in many places of this land; but the other two are more rare and hard to meet with, yet they are both found growing wild about Appledore, near Rye, in Kent.

TIME.

TIME. They flower usually about August, and the seed is ripe in September.

GOVERNMENT AND VIRTUES. The plant is venereal, pleasing, and harmless. The herb or root, being boiled in wine and drunk, is very powerful against the plague, and all pestilential diseases or fevers, poisons also, and the bitings of venomous beasts; it also helpeth those that are inwardly bruised by any casualty, or outwardly by falls or blows, dissolving the clotted blood; and the herb or root beaten and outwardly applied, taketh away the black and blue marks that remain in the skin. The decoction of the herb, with honey of roses put therein, is very effectual to help the inveterate tumours and swellings of the almonds and throat, by often gargling the mouth therewith. It helpeth also to procure women's courses, and easeth all pains of the mother, and to break and discuss wind therein, and in the bowels. The powder of the root taken in drink, driveth forth the worms in the body. The juice or distilled water of the herb is effectual for green wounds, or old sores, and cleanseth the body inwardly; and the seed outwardly frees it from sores, scurf, itch, pimples, freckles, morphew, especially if a little vitriol be dissolved therein.

D O C K.

MANY kinds of these are so well known, that I shall not trouble you with a description of them.

GOVERNMENT AND VIRTUES. All docks are under Jupiter; of which the red dock, commonly called bloodwort, cleanseth the blood and strengthens the liver; but the yellow dock root is best to be taken when either the blood or liver is afflicted by choler. All of them have a kind of cooling (but not alike) drying quality, the sorrels being most cold, and the bloodworts most drying: of the burdock I have spoken already by itself. The seed of most of the kinds, whether of the garden or field, do stay lasks or fluxes of all sorts; the loathings of the stomach through choler, and is helpful to those who spit blood. The roots, boiled in vinegar, help the itch, scabs, and breaking out of the skin, if bathed therewith. The distilled water of the herb and roots hath the same virtue, and cleanseth the skin of freckles, morphews, and all other spots and discolouring therein.

All docks, being boiled with meat, make it boil the sooner; besides, bloodwort is exceeding strengthening to the liver, and procures good blood, being as wholesome a pot-herb as any that grows in a garden.

D O D D E R of T H Y M E.

CALLED also epithimum, also other dodders.

DESCRIPTION. This first from seed giveth roots in the ground, which shoot forth threads or strings, grosser or finer, according to the property of the plant where-

to it belongeth, as also the climate; creeping and spreading on whatever it happens to fasten. These strings have no leaves at all upon them, but wind and entwine themselves so thick that it not only taketh away all comfort of the sun, but is ready to choak or strangle whatever plant it chanceth to cleave to. After these strings are risen to that height that they may draw nourishment from the plant, they seem to be broken off from the ground, either by the strength of their rising, or withered by the heat of the sun; upon these strings are found clusters of small heads or husks, out of which come whitish flowers, which afterwards give small pale-coloured seed, somewhat flat, and twice as big as poppy-feed. It generally participates of the nature of the plant which it climbeth upon; but the dodder of thyme is accounted the best, and is the only true epithimum.

GOVERNMENT AND VIRTUES. All dodders are under Saturn. The dodder which grows upon thyme is generally much hotter than that which grows upon colder herbs, for it draws nourishment from what it grows upon, as well as from the earth where its root is: This is accounted the most effectual for melancholic diseases, and to purge black or burnt choler, which is the cause of many diseases of the head and brain, as also for the trembling of the heart, faintings, and swoonings, and is helpful in all diseases and griefs of the spleen; and that of melancholy, arising from the windiness of the hypochondria. It purgeth also the reins or kidneys by urine; it openeth the obstructions of the gall, whereby it profiteth those who have the jaundice, as also the liver and spleen; it purgeth the veins of cholerick and phlegmatic humours, and helpeth children's agues, a little wormseed being put thereto.

The other dodders (as I observed before) participate of the nature of those plants whereon they grow, as that which hath been found growing upon nettles in the West-country hath by experience been found very effectual to procure plenty of urine, when it hath been stopped or hindered; and so of the rest.

DOG'S GRASS.

KNOWN also by the name of quick-grass or couch-grass.

DESCRIPTION. It is well known that this grass creepeth far about under ground with long, white, jointed, roots, having small fibres at each joint, very sweet in taste, as the rest of the herb is, and interlacing one another; from whence shoot forth many fair, long, grassy, leaves, small at the ends, and cutting or sharp on the edges. The stalks are joined like corn, with the like leaves on them, and a long spiked head with a long husk containing hard rough seed. If you know it not by this description, watch a dog when he is sick, and he will quickly lead you to it; for the instinct of these animals leads them to cure themselves by eating of this kind of grass.

PLACE.

PLACE. It groweth commonly in this kingdom, particularly in ploughed ground, being very troublesome both to husbandmen and gardeners to weed out of their grounds.

GOVERNMENT AND VIRTUES. It is a gentle remedy under the dominion of Jupiter. This is the most medicinal of all the quick-grasses: being boiled and drunk, it openeth obstructions of the liver and gall, and the stopping of the urine, and easeth the griping pains of the belly, and inflammations; wasteth the matter of the stone in the bladder, and also the ulcers thereof. The roots, bruised and applied, do consolidate wounds. The seed doth most powerfully expel urine, and stayeth the lask and vomiting. The distilled water alone, or with a little wormseed, killeth worms in children.

The method of using it, is to bruise the roots, and, having well boiled them in white wine, to drink the decoction: it is opening, but not very safe in purging: and it is a remedy against all diseases arising from stoppages of the body.

DOVE'S FOOT.

CALLED also crane's bill.

DESCRIPTION. This hath divers small, round, pale-green, leaves, cut in about the edges, much like mallows, standing upon long reddish hairy stalks, lying in a round compass upon the ground; among which rise up two or three, or more, reddish, jointed, slender, weak, and hairy, stalks, with some such-like leaves thereon, but smaller, and deeper cut toward the tops, where grow many very small bright, red, flowers of five leaves each; after which come small heads, with small short beaks pointing forth, as all other sorts of these herbs do.

PLACE. It groweth in pasture grounds, and by the path-sides in many places, and is sometimes found growing in gardens.

TIME. It flowereth in June, July, and August, sometimes earlier and sometimes later, and the seed is ripe quickly after.

GOVERNMENT AND VIRTUES. It is a very gentle, though martial, plant. It has been found by experience to be singularly good for the wind-cholic, and pains thereof; as also to expel the stone and gravel in the kidneys. The decoction thereof in wine is an excellent good wound-drink for those who have inward wounds, hurts, or bruises, both to stay the bleeding, to dissolve and expel the congealed blood, and to heal the parts; as also to cleanse and heal outward sores, ulcers, and fistulas; green wounds are likewise quickly healed by bruising the herb, and applying it to the part affected. The same decoction in wine, fomented to any place pained with the gout, or to any joint-achs or pain of the sinews, giveth great ease. The powder

or decoction of the herb, taken for some time together, will prove exceedingly efficacious in the cure of ruptures and burstings, either in young or old.

DUCK'S MEAT.

THIS is so well known to swim on the top of standing waters, as ponds, pools, ditches, &c. that it is needless further to describe it.

GOVERNMENT AND VIRTUES. Cancer claims the herb, and the Moon is the lady of it. It is effectual to help inflammations and St. Anthony's fire, as also the gout, either applied by itself or in a poultice with barley-meal. The distilled water hereof is held in high estimation for its virtues against all inward inflammations and pestilent fevers; as also to help the redness of the eyes, the swellings of the scrotum, and of the breasts before they are grown too much. The fresh herb, applied to the forehead, easeth the pains of the head-ach coming of heat.

DOWN, OR COTTON-THISTLE.

DESCRIPTION. THIS hath many large leaves lying on the ground, somewhat cut in, and as it were crumpled, on the edges, of a green colour on the upper side, but covered with long hairy wool, or cottony down, set with very sharp and piercing prickles; from the middle of its heads of flowers come forth many purplish or crimson threads, and sometimes (though but very seldom) white ones. The seed that followeth in the heads, lying in a great deal of fine white down, is somewhat large, long, and round, like the seed of lady's thistle, but somewhat paler. The root is large and thick, spreading much, and usually dies after seed-time.

PLACE. It groweth on divers ditches, banks, and in corn-fields, and highways, in almost every part of this kingdom.

TIME. It flowereth and beareth seed about the end of summer, at the time of the flowering and feeding of other thistles.

GOVERNMENT AND VIRTUES. Mars owns this plant. Pliny and Dioscorides write, that the leaves and roots hereof, taken in drink, help those who have a crick in the neck. Galen saith, that the root and leaves of this plant are of an heating quality, and good for such persons as have their bodies drawn together by spasms or convulsions, as also for children that have the rickets.

D R A G O N S.

THEY are so well known in this kingdom that they require no description; though we may just observe, for the benefit of such as are not perfectly acquainted with this plant, that they cannot mistake it if they take notice of the root, which very much resembles a snake.

GOVERNMENT AND VIRTUES. The plant is under the dominion of Mars, and is not without its obnoxious qualities. To use herbs of this description, the safest way is to press out the juice, and distil it in a glass-still in sand; it scoureth and cleanseth the internal as well as external parts of the body exceedingly; it cleanseth the skin from freckles, morpew, and sun-burning; the best way to use it externally is to mix it with vinegar; an ointment of it is very good to heal wounds and ulcers; it consumes cankers, and that flesh growing in the nostrils called polypus. The distilled water, being dropped into the eyes, takes away spots and blemishes, as also the pin and web, and cures dimness of sight; it is excellent good against the peevishness and poison. Pliny and Dioscorides affirm, that no serpent will approach any person carrying this herb about them:

DUNCH - DOWN.

NAMES. IT is called dunch-down, because, if the down thereof happens to get into the ears, it causeth deafness. It is called in Latin *typha palustris*, in English reed-mace and water-torch; the leaves of it are called mat-weed, because mats are made therewith.

DESCRIPTION. This herb hath long, rough, thick, and almost three-square, leaves, filled within with a soft pith or marrow; among the leaves sometime groweth up a long smooth, naked, stalk, without knots or joints, not hollow within, having at the top a grey or russet long knap or ear, which is round, soft, thick, and smooth, and seemeth to be nothing else but a thrum of russet wool or flocks, set thick and thronged together; which, as it ripeneth, is turned into down, and carried away with the wind. This down or cotton is so fine, that in some countries they fill cushions and beds with it. The roots are hard, thick, and white, with many threads hanging athwart each other; and when these roots are dry, they serve for little else than firing.

DWARF PLANE - TREE.

IN Latin this tree is called *platanus orientalis vera*.

GOVERNMENT AND VIRTUES. The tender leaves boiled in wine, and used in the manner of an ointment, stop fluxions of the eyes; the bark, boiled in vinegar, is used for pains of the teeth; but its use in physic is now become obsolete.

DOUBLE - TONGUE.

KINDS AND NAMES. THERE is found two kinds hereof; it is called double-tongue, horse-tongue, and laurus of Alexandria.

DESCRIPTION. Double-tongue hath round stalks, like those of Solomon's seal, about a foot and a half high, upon each side whereof grow thick brownish leaves, not much unlike bay-leaves, upon the which there groweth, in the middle of every leaf, another small leaf, fashioned like a tongue; and betwixt the small and large leaves there grow round red berries, as big as a pea; the root is tender, white, long, and of a pleasant smell.

There is also another kind of double-tongue, which also bringeth forth its fruit upon the leaves, and is like the first in stalks, leaves, fruit, and roots, except that the great leaves and berries grow alone, without the addition of the small leaf.

PLACE. It groweth in Hungary and Austria, and in the woods and forests in Italy; but is scarcely ever seen in England, unless planted for curiosity.

TIME. The seed of this herb is generally ripe in September.

GOVERNMENT AND VIRTUES. Double-tongue is an herb of Venus. The leaves and roots thereof are much esteemed for assuaging swellings of the throat, the uvula, and kernels under the tongue; as also against the ulcers and sores of the same, being taken as a gargle. Marcellus observes, that in Italy they hang this herb about children's necks, that are sick in the uvula; and Dioscorides affirms, that, if it be worn upon the bare head, it is good for the head-ach. This herb is good for the diseases of the mother, and a spoonful of the decoction of the leaves taken causeth the strangled matrix to descend down to its natural place.

The root of laurel of Alexandria, boiled in wine and drunk, helpeth the stranguary, provoketh the urine and women's natural sickness, procures easy delivery, expelleth the secundine, and all corruptions of the matrix.

WHITE DAFFODIL.

NAMES. It is also called narcissus, and primrose-pearls.

KINDS. There are several kinds hereof, one with a crimson or red purple circle in the middle of the flower, and another having a yellow circle, resembling a coronet, or cup, in the middle of the flower. There is another kind that is yellow in the middle, and another sort which beareth double flowers.

DESCRIPTION. The first kind of daffodil, or narcissus, hath small narrow leaves, like leek-blades, with a crested, bare, naked, stalk, without leaves, of a foot or nine inches long, with a flower at the top, growing out of a certain film or skin, generally growing singly, or alone, though sometimes two together, consisting of six little white leaves; in the middle whereof is a small round wrinkled hoop or cup, bordered about the brim with a certain round edge, wherein are contained several small threads or stems, with yellowish tips hanging thereon; after the flowers appear
angled

angled husks, wherein grow black seeds; the root is round and bulbous, not much unlike an onion.

The other narcissus, with the yellow cup or circle in the middle, has blades longer and broader, and not so green as those of the first; the stalks are longer and thicker, and upon every one of them standeth three or four flowers like unto the first, except that they are yellow in the middle.

There is another kind that is yellow in the middle, and bears many more flowers, which are smaller than those before described.

PLACE. The first two kinds grow plentifully in many places of France, as Burgundy, Languedoc, &c. in meadows and pastures; but in this country, they grow only in gardens where they are planted.

TIME. They flower chiefly in March and April, though some of them bloom not until the beginning of May.

TEMPERATURE AND VIRTUES. Venus challengeth the dominion over these plants. The root of it is hot and dry in the third degree; the which root, being boiled or roasted, or taken in meat or drink, provoketh the stomach to vomiting; the same pounded with a little honey is good to be applied to burnings or scaldings, and cureth sinews that are hurt or sprained, and is good to help dislocations, or members out of joint, being applied thereto; it also giveth ease in all old griefs and pains of the joints. The roots of narcissus take away all spots of the face, being mingled with nettle-seed and vinegar, and applied. It mundifieth and cleanseth corrupt and rotten ulcers, and ripeneth and breaketh hard imposthumes, if it be mixed with the meal of vetches and honey, and used in the manner of a poultice; and, being mixed with the meal of juray and honey, it draweth forth thorns and splinters.

YELLOW DAFFODIL.

NAMES. THIS kind of daffodil is also called lide-lilly, because it flowereth in March, which month in some countries is called Lide, and they are likewise known by the name of daffydow-dillies.

DESCRIPTION. It hath long, narrow, green, leaves; the stalks are round, upon which grow yellow flowers, of an unpleasing smell; after which come round knobs or husks, like little heads, wherein the seed is contained; it hath abundance of roots, which grow thick together, and increase by new sprigs and blades, whereby it spreadeth and increaseth itself under ground, so that the increase of this plant is very rapid.

PLACE. It does not grow naturally in this country, but in gardens where it is planted.

TIME.

TIME. Daffodils flower in March and April, and the seed ripens soon after.

GOVERNMENT AND VIRTUES. Yellow daffodils are under the dominion of Mars, and the roots hereof are hot and dry almost in the third degree. The roots, boiled and taken in posset-drink, cause vomiting, and are used with good success at the appearance of approaching agues, especially the tertian ague, which is frequently caught in the spring time. A plaster made of the roots, with parched barley-meal, dissolves hard swellings and imposthumes, being applied thereto; the juice, mingled with honey, frankincense, wine, and myrrh, and dropped into the ears, is good against the corrupt fifth and running matter of the ears; the roots, made hollow, and boiled in oil, help raw kibed heels; the juice of the root is good for the morpew, and the discolourings of the skin.

D A T E - T R E E.

NAMES. THIS is likewise called palm-tree, and the fruit is called dates, or fruit of the palm-tree.

DESCRIPTION. It groweth to be a large tree, with a straight thick trunk, covered with a scaley-bark; at the top whereof grow many long branches, bearing a vast number of long, straight, narrow, leaves, or twigs like reeds, so that the whole tree appears to be nothing but a bundle of reed-leaves; amongst the branches groweth the fruit, clustering together at the first, and wrapped in a certain long and broad covering, like a pillow, which afterwards openeth and sheweth the fruit standing along on certain small sprigs, growing out of a flat yellow branch; the fruit is long and round, containing within it a long and hard stone. Of this tree there are two kinds, the male and female; the male tree bringeth forth flowers only, which vanish away as soon as the blossom is full; and the female beareth the fruit, and bringeth it to perfection and ripeness.

PLACE. The date-tree groweth in Africa, Arabia, India, Syria, Judæa, and other eastern countries.

TIME. It continueth always green, and beareth its flowers in the spring. In hot countries the fruit is ripe in autumn.

GOVERNMENT AND VIRTUES. The branches and leaves are cold and astringent, the fruit is also somewhat astringent, but hot and dry almost in the second degree; especially before it is thoroughly ripe. Dates are hard of digestion, and cause oppilations in the liver and spleen; they ingender windiness, head-ach, and gross blood, if eaten green and fresh; but, being quite ripe, they are not so hurtful, but nourish indifferently, being well digested in a good stomach. Dry dates stop looseness and stay vomiting and sick qualms of the stomach, especially of women with child, if they

they are eaten; as also mingled with other proper medicines, and applied as a plaster to the stomach. Being administered inwardly or applied outwardly, with medicines convenient, they strengthen the weakness of the liver and spleen. The leaves and branches are good to heal green wounds, and refresh and cool hot inflammations. There is a direction, in the plaster diacalcitheos, that it be stirred with a stick of the palm-tree, that it might be of the more virtue and efficacy; from whence also the same plaster is called diapalma.

DICTAMNUM OF CANDIA.

KINDS AND NAMES. IT is observed by Dioscorides, that there are three kinds hereof; the first whereof is the right dictamnium, the second is the bastard dictamnium, and the third is another kind, bearing both flowers and seed, it is called also dittany of Crete, and in the shops diptanum.

DESCRIPTION. The first kind, which is the right dictamnium, is a hot and sharp plant, much resembling penny-royal, except that this hath larger leaves, somewhat hoary or mossy, with a certain fine down, or woolly white cotton; at the top of the stalks or branches grow certain small spiky tufts, hanging by small stems, greater and thicker than the ears or spiky tufts of wild marjoram, and are somewhat of a red colour, in which there grow small flowers.

The second kind, called bastard dictamnium, is very much like the first, except in taste; it does not bite or hurt the tongue, as does the former, neither is it so hot. It hath round, soft, woolly, stalks, with knots and joints, at each of which joints there stand two leaves, somewhat round, soft, and woolly, not much unlike the leaves of penny-royal, but that they are larger, all hoary and white, soft and woolly, without any smell, but bitter in taste; the flowers are of a light-blue, compassing the stalk, at certain spaces like garlands, and like the flowers of penny-royal and hoarhound; the root is of a woody substance.

The third kind is like the second in figure, saving that its leaves are greener and more hoary; covered with a fine, white, soft, hair, almost like the leaves of water-mint, the whole plant hath a good and pleasant smell, as it were betwixt the scent of water-mint and sage, as saith Dioscorides.

PLACE. The first kind, or the right dictamnium, cometh from Crete, now called Candia, an island in the Mediterranean sea, formerly belonging to the Venetians, but now in possession of the Turks.

The other two kinds are not confined to Candia only, but grow also in many other hot countries.

GOVERNMENT AND VIRTUES. The right dictamnium is hot and dry, and of subtil parts; the other two kinds are also hot and dry, but not quite so hot as the first;

they are all under Venus. The right dictamnium is of the same virtue as penny-royal, but much stronger and better. It bringeth down the courses, after-birth, and dead child, either taken in meat or drink, or used as a pessary or mother-suppository. The same virtue hath the root, which is hot and sharp upon the tongue; the juice is very good to be drunk against all venoms, and the bitings of venomous beasts and serpents. Dictamnium is of such force against poison, that the savour or smell thereof driveth away all venomous beasts or serpents; the juice of the same is of singular efficacy against all kinds of wounds, if dropped or poured therein; it both mundifieth, cleanseth, and healeth, the same; it qualifyeth and assuageth the pain of the milt and spleen, and wasteth and diminisheth it, being either taken inwardly or applied outwardly to the place; it draweth forth splinters and thorns if it be bruised and laid upon the affected part.

The bastard dictamnium hath the same virtues as the first, though not quite so powerful in its operations.

The third kind is very profitable, compounded with medicines, drinks, and plasters, against the bitings or stings of venomous beasts.

FALSE DICTAMNUM.

NAMES. THIS herb is called in Latin *tragium*, and by some *fraxinella*; some apothecaries do use the root hereof instead of the right dictamnium, from whence it is called bastard or false dictamnium.

DESCRIPTION. This plant somewhat resembles lentisks or licoras, both in leaves and branches; it hath round, blackish, rough, stalks, bearing on the tops thereof fair flowers, of a bluish colour, which on the upper part have four or five leaves, and on the lower part small long threads, crooking or hanging down almost like a beard. After the flowers are gone, in the place of each come four or five cods, somewhat rough without, slippery or slimy in handling, and of a strong smell, not unlike that of a goat; in which is contained a black, plain, shining, seed. The roots are long and white, sometimes as thick as one's finger, and generally grow one against the other.

PLACE. It groweth in the Isle of Candia, and is sometimes found in the gardens of curious botanists.

TIME. It flowereth in June and July.

GOVERNMENT AND VIRTUES. This plant is also under the dominion of Venus. It is hot almost in the third degree, and of subtil parts; the seed taken to the quantity of a drachm is good against the stranguary; it provoketh urine, it is good against the stone in the bladder, breaking and bringing it forth, and bringeth down the terms of women; the leaves and juice taken after the same manner have similar virtues.

ues, and, being externally applied, draw out thorns and splinters; the root taken with a little rhubarb killeth and driveth forth worms, and is of singular excellence against their return.

Dioscorides observes of this plant, as also of the former, that it is natural to wild goats, when they are struck with darts or arrows, to eat of this herb, which causeth them to fall out of their bodies; on which account it is not improbable that this herb came first to be substituted for the right dictamnium.

ELM - TREE.

THIS tree is so well known, growing generally in most counties of this kingdom, that it would be needless to describe it.

GOVERNMENT AND VIRTUES. It is a cold and Saturnine plant. The leaves hereof, bruised and applied, heal green wounds, being bound thereon with its own bark; the leaves, or the bark used with vinegar, effectually cure the scurf and leprosy; the decoction of the leaves, bark, or root, healeth broken bones by bathing the part affected therewith; the water that is found in the bladders on the leaves, while it is fresh, is a good wash for cleansing the skin, and making it fair; and, if cloths are often wet therein, and applied to the ruptures of children, it helpeth them, if they are afterwards well bound up with a truss; the said water, being close stopped in a glass vessel, and set either into the earth or dung for twenty-five days, setting the bottom thereof upon a lay of common salt, so that the feces may settle, and the water become very clear, is a singular and sovereign balsam for green wounds, being used with soft tents: the decoction of the bark of the root mollifieth hard tumours, and the shrinking of the sinews, being fomented therewith; the roots of the elm boiled for some considerable time in water, the fat rising on the surface, being nicely taken off, will prove an excellent restorative of fallen hair, the bald places being with it anointed; the bark ground with brine or pickle, until it cometh to the thickness of a poultice, and laid on the place pained with the gout, giveth great ease; and the decoction of the bark in water is exceeding good to bathe such places as have been burned with fire.

E N D I V E.

DESCRIPTION. COMMON garden endive beareth a longer and larger leaf than succory, and abideth but one year, quickly running up to stalk and seed, and then perishing; it hath blue flowers, and the seed is so much like that of succory, it is hard to distinguish them.

GOVERNMENT AND VIRTUES. It is a fine cooling, cleansing, plant; the decoction of the leaves, or the juice, or the distilled water of endive, serveth well to cool the ex-

cessive

cessive heat of the liver and stomach, as also the hot fits of agues, and all other inflammations; it cooleth the heat and sharpness of the urine, and the excoriations in the uritory parts; the seed has the same properties, though rather more powerfully, and besides is available for the faintings, swoonings, and passions of the heart. Outwardly applied, they serve to temper the sharp humours or fretting ulcers, hot tumours, swellings, and pestilential sores; it wonderfully helpeth not only the redness and inflammation of the eyes, but the dimness of the sight also. It is likewise used to allay the pains of the gout; in fact it cannot be used amiss. The syrup of it is a fine cooling medicine for fevers.

E L E C A M P A N E.

DESCRIPTION. THIS shooteth forth many large leaves, long and broad, lying near the ground, small at both ends, somewhat soft in handling, of a whitish green on the upper side and grey underneath, each set upon a short footstalk; from among these rise up divers great and strong hairy stalks, three or four feet high, with some leaves thereon, compassing them about at the lower ends, and are branched toward the tops, bearing several large flowers, like those of the corn marygold, both the border of leaves and the middle thrumb being yellow; this is followed by a down, with long, small, brownish, seed amongst it, which is carried away with the wind. The root is large and thick, branching forth many ways, blackish on the outside, and white within, of a very bitter taste, and strong but pleasant smell, especially when they are dried; it is the only part of the plant which has any smell.

PLACE. It groweth in moist grounds and shadowy places oftener than in the dry and open borders of fields and lanes, and other waste places, almost in every county of this kingdom.

TIME. It flowereth in June and July, and the seed is ripe in August. The roots are gathered for medicinal purposes, as well in the spring, before the leaves come forth, as in autumn or winter.

GOVERNMENT AND VIRTUES. It is a plant under the dominion of Mercury. The fresh roots of elecampane preserved with sugar, or made into a syrup, or conserve, are very good to warm a cold and windy stomach, or the pricking therein, and stitches in the sides, caused by the spleen; also to help a cough, shortness of breath, and wheezing in the lungs. The dry root made into powder, and mixed with sugar and taken, answereth the same purposes, and is also profitable to those who have their urine stopped; likewise to prevent the stoppages of the menstrua, the pains of the mother, and of the stone in the reins, kidneys, or bladder; it resisteth poison, and stayeth the spreading of the venom of serpents, as also of putrid and pestilential fevers, and also the plague. The roots and herbage beaten and put into new ale or beer,

beer, and drunk daily, cleareth, strengtheneth, and quickeneth, the sight of the eyes exceedingly. The decoction of the roots in wine, or the juice taken therein, killeth and driveth forth all manner of worms in the belly and stomach; if gargled in the mouth, or the root chewed, fasteneth loose teeth, and helpeth to keep them from putrefaction; being drunk, it is good for those who spit blood, helpeth to remove cramps or convulsions, the pains of the gout, the sciatica, the looseness and pains in the joints, or members disjointed or sprained, proceeding from colds or moisture happening to them, applied either internally or externally; it is also used with good effect by those who are bursten, or have any inward bruise. The roots being well boiled in vinegar, afterwards beaten and made into an ointment with hog's suet and oil of trotters, is an excellent remedy for the scab or itch, either in young or old; the places also bathed or washed with the decoction doth the same, and helpeth all sorts of filthy, old, putrid, sores or cankers. In the roots of this herb lieth the chief effect for all the remedies aforesaid. The distilled water of the leaves and roots together is very profitable to cleanse the skin from morpew, spots, or blemishes.

E R I N G O.

KNOWN also by the name of sea-holly.

DESCRIPTION. The leaves of this plant are nearly round, deeply dented about the edges, hard, and sharp pointed, a little crumpled, and of a bluish green colour, each having a long footstalk; the leaves, when young, are neither so hard nor prickly as when come to its maturity. The stalk is round and strong, somewhat crested with joints, bearing leaves thereat, which are more divided, sharp, and prickly, than those before mentioned; from these joints it also branches forth many ways, each bearing on the top several bluish, round, prickly, heads, with many small, jagged, prickly, leaves under them, standing like a star, which are sometimes of a greenish or white colour. The root groweth very long, sometimes to the length of eight or ten feet, set with rings or circles toward the upper part, but smooth and without joints downwards, brownish on the outside but very white within, with a pith in the middle, of a pleasant taste, but much more so when carefully preserved and candied with sugar.

PLACE. It is found on the sea coasts, and in almost every part of this kingdom bordering on the sea.

TIME. It flowereth at the latter end of the summer, and giveth its seed about a month after.

GOVERNMENT AND VIRTUES. The plant is venereal, and produceth a great quantity of seed; it is hot and moist, and under the sign *Libra*. The decoction of the

root taken in wine is very effectual in opening the obstructions of the spleen and liver. It helpeth the yellow jaundice, the dropsy, the pains in the loins, and wind cholic, provoketh urine, expelleth the stone, and procureth women's courses. The decoction taken for fifteen days on going to bed and in the morning fasting, helpeth the strangury, the evacuation of the urine by drops, the stopping of urine, the stone, and all defects of the reins and kidneys, and by a longer continuance of the aforesaid decoction great relief will be found against the French disease. The roots bruised, and externally applied, help the kernels of the throat, commonly called the king's evil, or taken inwardly, and applied to the place stung or bitten by a serpent, heal it speedily. If the roots are bruised and boiled in hog's lard, it is good for drawing forth thorns, splinters, &c. and closing the incisions made thereby. The juice of the leaves dropped into the ears, helpeth imposthumes therein; the distilled water of the whole herb, when the leaves and stalks are young, may be drunk with good success for all the purposes aforesaid.

E Y E - B R I G H T.

DESCRIPTION. COMMON eye-bright is a small low herb, rising up usually but with one blackish green stalk, about a span high, spread from the bottom into sundry branches, whereon are set small, and almost round, yet pointed, dark green leaves; they are finely snipped about the edges, two always set together, and very thick; at the joints with the leaves, from the middle upwards, come forth small white flowers, striped with purple and yellow, after which follow small round heads containing very small seed; the root is long, small, and thready at the end.

PLACE. It groweth in meadows and grassy places.

GOVERNMENT AND VIRTUES. It is under the sign Virgo, and Sol claims the dominion over it. The juice of this herb, taken in white wine or broth, or dropped into the eyes for several days together, helpeth all the infirmities of them. Some make a conserve of the flowers for the aforesaid purpose. Being used either of these ways, it also helpeth a weak brain or memory. If tunned up with strong beer that it may work together, and drunk; or the powder of the dried herb mixed with sugar, a little mace, and fennel-seed, and drunk or taken in broth; or the said powder taken as an electuary; each of these hath the same powerful effect to help and restore the loss of sight through age.

E L D E R - T R E E.

I CONSIDER it needless to trouble my readers with a description of this tree, since there is scarce a school-boy but can point it out; shall therefore proceed to the

DWARF-

DWARF-ELDER,

CALLED also dead-wort and wall-wort.

DESCRIPTION. This herb springeth fresh from the ground every spring; its leaves and stalks perishing at the approach of winter. It is like the common elder both in form and quality, rising up with a square, rough, hairy, stalk, about four feet high, though sometimes higher; the winged leaves are somewhat narrower than of that aforementioned, but in other respects not unlike them; the flowers are white dashed with purple, standing in umbels, resembling those of the former except in smell, these being the most pleasant; after the flowers come small blackish berries, full of juice whilst they are fresh, containing small hard kernels, or seed. The root doth creep under the upper crust of the ground, springing in divers places, and being in general about the size of a person's finger.

PLACE. It groweth wild in many parts of the kingdom, and is with difficulty erased from the place where it once takes root.

TIME. Most of the elder-trees flower in June, and their fruit is ripe in August; but the dwarf kind or wall-wort flowereth somewhat later, and its fruit is not ripe till September.

GOVERNMENT AND VIRTUES. Both the common and dwarf elders are under the dominion of Venus. The first shoots of the common-elder boiled like asparagus, or the young leaves and stalks boiled in fat broth, expelleth phlegm and choler; the middle or inward bark boiled in water, and drunk, purgeth exceedingly; and the berries, either green or dry, are often given with good success for the dropsy; the bark of the root boiled in wine, or the juice thereof drunk, hath the same virtue, though more powerful in its operations. The juice of the root doth strongly provoke vomiting, and purgeth the watery humours of the dropsy. The decoction of the root cureth the biting of a mad dog, as also that of the adder; it mollifieth the hardness of the mother, and bringeth down the courses; the berries boiled in wine, performeth the same effect, and the hair of the head, washed therewith, is made black. The juice of the green leaves applied to the hot inflammations of the eyes assuageth them, and, being snuffed up the nostrils, purgeth the tunics of the brain. The juice of the berries boiled with honey, and dropped into the ears, cureth the pains thereof; by drinking a decoction of the berries in wine, urine is provoked; the distilled water of the flowers is very serviceable for cleansing the skin from sun-burning; freckles, morpew, &c. It cureth the head-ach by washing it therewith, and, being used as a bath, it is a certain cure for ulcerated legs; it removeth the redness of the eyes, and helpeth those who are afflicted with the palsy.

The dwarf-elder is more powerful than the common in opening and purging choler, phlegm, and water; it helpeth the gout, piles, and the diseases incident to women: it coloureth the hair black, helpeth the inflammations of the eyes, and pains of the ears, the biting of serpents or mad dogs, burnings and scaldings, the wind cholic, the stone, the difficulty of urine, and the cure of old fores and fistulous ulcers. Dr. Butler observes, that the decoction of elder is a most excellent relief for the dropfy.

ERYSIMUM.

DESCRIPTION. This plant hath long leaves, deeply cut or jagged on the edges, not much unlike the leaves of wild mustard; the stalks are small, slender, and pliant, and will twist and wind like the withy. Upon each of these stalks grow many yellow flowers; which are followed by long slender husks, containing seed of a sharp biting taste; the root is very long and thick, with many small strings or threads hanging thereto.

PLACE. It delights in stony untilled places, and is to be found in most of the bye-paths and bank-sides in this kingdom.

TIME. It generally flowereth in the months of June and July, though their blossoms are sometimes seen later in the year.

GOVERNMENT AND VIRTUES. The seed of this plant taken with honey ripeneth and causeth the evacuation of tough and clammy phlegm; it is also good against shortness of breath, and is effectual in removing an old cough. If the seed be steeped in fair water and then dried by the fire, it is good for the gripings of the belly and expelleth all venom and poison. An ointment made of the seed consumeth and wasteth all hard swellings and imposthumes behind the ears, as also cankers and swellings in the breasts, genitals, &c.

EGLANTINE.

THIS is better known by its common name, sweet brier, and is called in some counties wild brier, and pimperl-rose. The Latins call it *cynorrhodon*, and the Greek *rodon agrion*. Another species of eglantine is the dog-rose, and all other wild roses.

TIME AND PLACE. The sweet-brier, from its fragrant and pleasant smell, is cultivated in most gardens and pleasure grounds. It grows likewise wild in the borders of fields, and in woods, in almost every part of this kingdom; but not by far so plentifully as the dog-rose. It begins to shoot forth its buds early in the spring, and flourisheth and flowereth during the time of all the other rose-trees.

GOVERN-

GOVERNMENT AND VIRTUES. Sweet-briar is under the dominion of Jupiter, and the dog-rose is under the Moon. The leaves of the flowers are not so efficacious in medicine as rose-leaves, which, being also more abundant, are always used in preference. The spongy apples or balls which are found upon the eglantine, if pounded to a paste, and mixed with honey and wood-ashes, are an excellent remedy for the alopecia, or falling off of the hair; and, being dried and powdered, and taken in white wine, are good against the stone and gravel, removing the stranguary, and strengthening the kidneys. The same boiled in a strong decoction of the roots is good to heal the bitings of venomous beasts or mad dogs. The red berries which succeed the flowers, called hips, if made into a conserve, and eaten occasionally, gently bind the belly, stop defluxions of the head and stomach, help digestion, sharpen the appetite, and dry up the moisture of cold rheum and phlegm upon the stomach. The powder of the dried pulp is an excellent remedy for the whites; and, if mixed with the powder of the balls, and given in small quantities, is an excellent remedy for the cholick, and to destroy worms.

EUPHORBIIUM, OR GUM-THISTLE.

THIS plant is so well known, and so common in every part of this kingdom, that any description of it would be altogether superfluous.

PLACE. They grow in most fields and meadows throughout this kingdom, and particularly in grounds sowed with corn.

TIME. They flower from the beginning of June until the end of September; and the seed progressively ripens from the end of June to the beginning of November.

GOVERNMENT AND VIRTUES. This plant is under the dominion of the planet Mars, and partakes more of his fiery nature than any of the other thistles. It is hot and dry in the fourth degree, being a perfect caustic, and of thin parts. An em-plaster made of it, with twelve times as much oil, and a little wax, heals all aches of the joints, lameness, palsies, cramps, and shrinkings of the sinews. Mixed with oil of bay and bear's grease, it healeth scurfs and scalds in the head, and restoreth lost hair; applied with oil to the temples, it healeth the lethargy, and, by putting it to the nape of the neck, it preventeth the apoplexy. Being mixed with vinegar, it removeth all blemishes of the skin, or, with other ointments, it heateth the parts that are cold, and healeth the sciatica. Taken inwardly, it fretteth the intrails and scorcheth the whole body, therefore must be beaten small, and tempered with something that lubricatieth and allayeth its heat and sharpness, and then it purgeth water and phlegm. The remedy is *anteuphorbium*, which is succulent, cold, and slimy. The pills of euphorbium greatly help dropfies, pains in the loins, and gouts, by mois-

ture. The simple oil of this plant hath the same virtues as that of castor, but is much stronger; if snuffed up the nose, it purgeth the head of phlegm; it is also good in old and cold pains of the joints, liver, and spleen. It is good for cold diseases of the nerves and brain, the head-ach, and pains in the side thereof; it cures the lethargy, being snuffed up the nose; anointed on the privities, it provoketh lust, and it healeth all numbness and stiffness proceeding from cold. *Oleum de euphorbia compositum*, or the compound oil of euphorbium, operates as the simple, but more effectually; it healeth old and cold diseases of the nerves and brain, and prevents drowfiness. It is very effectual in cold pains of the womb, kidneys, and bladder, being anointed on the regions thereof. The extract of euphorbium healeth the palsy, gout, spasm, and dropsy, and bringeth phlegm from the nerves.

F E R N.

DESCRIPTION. OF this there are two kinds principally to be treated of; viz: the male and female. The female groweth higher than the male, but the leaves thereof are less and more divided or dented, but of the same smell as that of the male. The virtues of each are the same.

PLACE. They grow on heaths and in shady places near the hedge-sides in most parts of this kingdom.

TIME. They flower and seed at midsummer.

GOVERNMENT AND VIRTUES. It is under the dominion of Mercury, both the male and female. The roots of both these sorts offersns, being bruised and and boiled in mead, or honey-water, and drunk, kill both the broad and long worms in the body, and abate the swelling and hardness of the spleen. The green leaves, eaten, purge the belly of cholerick and waterish humours, but they trouble the stomach; they also cause abortion, consequently are unfit for the use of pregnant women. The roots bruised, and boiled in oil or hog's lard, make a very profitable ointment to heal wounds, or draw forth thorns from the flesh. The powder of them, used in foul ulcers, drieth up their malignant moisture, and causeth their speedy healing. Fern being burnt, the smoke thereof driveth away serpents, gnats, and other noisome creatures, which in fenny countries are sometimes very troublesome.

W A T E R - F E R N.

IT is called also osmond-royal.

DESCRIPTION. This shooteth forth in the spring time; it hath several rough hard stalks, half-round, or flattish on one side, and hollow; they are about two feet high, having many branches of winged yellowish green leaves on all sides, set one against another,

another, longer, narrower, and not nicked on the edges; from the top of some of these stalks grows forth a long bush of small and more yellowish green scaly aglets, set in the same manner on the stalks as the leaves are; these are supposed to be the flowers and seed. The root is rough, thick, and scaly, having a white pith in the middle, which is called the heart thereof.

PLACE. It groweth in moors, bogs, and watery places, in many parts of this kingdom.

TIME. It is green all the summer, but the root liveth during the winter.

GOVERNMENT AND VIRTUES. Saturn owns this plant. It hath all the virtues of the former ferns, though much more effectual in its operations than either, both for inward and outward griefs, and is a singular remedy for wounds, bruises, &c. The decoction drunk, or boiled down to an oil or ointment, and applied, is also good for bruises, and bones broken or disjointed; as also for ruptures and burstings, and giveth much ease to the cholic and in splenetic diseases. The decoction of the root, taken in white wine, provoketh urine exceedingly, and cleanseth its passages. Of the ashes of these ferns, with water, are made balls, (particularly in Warwickshire and Staffordshire,) with which, being dried in the sun, they wash their clothes instead of soap; but before they use them they put them into a light fire till they are red-hot, and then they will easily powder.---This fern also is used in Suffex to burn lime, the flame being very fit for that purpose.---The juice of the root is good for burns.---The ashes cast upon stones, instead of nitre, make glass of a green colour.

FEATHERFEW.

DESCRIPTION: COMMON featherfew hath many large, fresh, green, leaves, very much torn or cut on the edges; the stalks are hard and round, set with many fuch-like leaves, but somewhat smaller; at the tops stand many single flowers, each upon a small footstalk; they consist of many small white leaves, standing round a yellow thrumb. The root is somewhat hard and short, with many strong fibres.---The smell of the whole plant is strong; the taste bitter.

PLACE. There are some places in this kingdom where it grows wild; but it is generally a garden-plant.

TIME. It flowereth in the months of June and July.

GOVERNMENT AND VIRTUES. This herb is governed by Venus. Being boiled in white wine, and the decoction drunk, it cleanseth the womb, expelleth the after-birth, and is of general utility to the fair sex. It is used for the diseases of the mother, either in the rising or strangling of the same, or when attended with hardness or inflammation, being applied outwardly thereunto. A decoction of the flowers

flowers in wine, with a little nutmeg or mace therein, drunk several times a-day, is an approved provocative of women's courses, as also a great help to expel the dead and after births; and to sit over the hot fumes of the decoction of the herb, made in water or wine, will prove equally serviceable. The decoction, mixed with sugar or honey, is good to help a cough, to cleanse the chest or stomach of phlegm, and to expel the stone. The powder of the herb taken in wine, with some oxymel, purgeth both choler and phlegm, and is good for those who are short-winded, or are troubled with melancholy or lowness of spirits; it is effectual in removing all pains of the head arising from a cold, the herb being bruised, and applied to the crown thereof; used in the same manner, it is likewise good for the swimming or giddiness of the head. The decoction thereof drunk warm, and the herb bruised with a few grains of bay-salt, and applied to the wrists, will prevent the return of ague-fits. The distilled water taketh away freckles and other spots of the skin, and other blemishes in the face; the herb bruised, and heated on a tile, with some wine to moisten it, or fried with a little oil and wine in a frying-pan, and applied warm outwardly, helpeth the wind and cholic in the lower part of the belly. It is an especial remedy against the too liberal use of opium.

F E N N E L.

EVERY garden affordeth this so plentifully, that it needeth no description.

GOVERNMENT AND VIRTUES. It is governed by Mercury, under Virgo, and beareth antipathy to Pisces. It is exceeding good to be boiled with fish, as it consumeth the phlegmatic humour arising therefrom. Fennel is good to break wind, provoke urine, and ease the pains of, as well as break, the stone. The leaves and seed boiled in barley-water, and drunk, are good to increase milk and make it more wholesome. The leaves, or rather the seed, boiled in water, will stay the hiccough, and take away the loathing which often happens to the stomach of sick and feverish persons, and allayeth the heat thereof; the seed, if it be boiled in wine, and drunk, is good for those who are bitten by a serpent, or have eaten poisonous herbs; the seed and root help to open obstructions of the liver, spleen, and gall, and thereby remove the painful and windy swellings of the spleen, the yellow jaundice, and the gout and cramp; the seed is of great use in medicines given to help shortness of breath, and wheezing by stoppage of the lungs; and it helpeth to bring down the courses, and cleanse the parts after delivery. The roots are good to be put into diet-drinks and broths that are taken to cleanse the blood, to open obstructions of the liver, to provoke the urine, to amend the ill colour of the face after sickness, and to cause a good habit of the body. The distilled water of the whole herb, or the condensate juice dissolved, (but especially the natural juice that issueth forth from this

this plant in hot countries,) dropped into the eyes, cleanseth them from mist and film growing upon the sight thereof. The sweet fennel is much weaker in physical uses than the common fennel, and the wild is stronger and hotter than the tame, and therefore more powerful against the stone, but not so effectual to increase milk, because of its driness.

S O W - F E N N E L.

BESIDES the common English names of sow-fennel, hogs-fennel, hoar-strong, hoar-strang, sulphur-wort, and brimstone-wort, it is called in Latin *peusdanum*.

DESCRIPTION. The common sow-fennel hath many branched stalks of thick and somewhat long leaves; three of which generally grow together; the stalk is straight and crested, with joints thereon, somewhat less than the common fennel, and branching forth at the top several small sprays with tufts of yellow flowers, after which cometh flat, thin, and yellowish, seed, rather larger than that of the former. The root groweth great and deep, with many fibres hanging thereto, of a strong smell, and yieldeth a yellowish clammy juice, almost like a gum.

PLACE. It groweth plentifully in the low salt marshes near Feverham in Kent.

TIME. It flowereth and seedeth in July and August.

GOVERNMENT AND VIRTUES. This also is an herb of Mercury. The juice of sow-fennel used with vinegar and rose-water, or the juice with a little euphorbium, put to the nose, helpeth those who are troubled with the lethargy, the frenzy, the turning or giddiness of the head; the falling sickness, long and inveterate head-ach, the palsy, sciatica, cramp, and in general all the diseases of the sinews, being mixed with oil and vinegar, and the affected parts bathed therewith. The juice dissolved in wine, or put into an egg, is good for a cough, or shortness of breath, and to expel wind; it purgeth the belly gently, helpeth the hardness of the spleen, giveth ease to pregnant women, and also to the pains of the reins, bladder, and womb. A little of the juice dissolved in wine, and dropped into the ears, easeth the pains thereof, or, put into an hollow tooth, easeth the tooth-ach; the root is less effectual in all the aforesaid diseases, yet it is not without its virtues; the powder of it cleanseth foul ulcers, draweth forth splinters of broken bones, drieth up old and inveterate running sores, and is an excellent salve for green wounds.

F I G - W O R T.

CALLED also throat-wort.

DESCRIPTION. Common great fig-wort shooteth forth several great, strong, hard, square, brown, stalks, three or four feet high, whereon grow large, hard, and dark

green, leaves, two on a joint, being larger and harder than nettle leaves, but do not sting; at the tops of the stalks stand many purple flowers, set in husks, not unlike those of water-betony, which are followed by round heads with a small point in the middle, containing small brownish seed. The root is large, white, and thick, shooting forth many branches under the upper crust of the earth, which abideth many years, but the leaves perish annually.

PLACE. It groweth frequently in moist and shady places, and in the bottoms of fields and meadows.

TIME. It flowereth about July, and the seed ripens about a month after the flowers are fallen.

GOVERNMENT AND VIRTUES. Venus claims dominion over this herb. It is an excellent remedy for the king's evil or any other disease in the neck; the decoction of the herb taken inwardly, and the bruised herb applied outwardly, dissolveth clotted and congealed blood, coming from any wound, bruise, or fall, and is no less effectual in removing knots, kernels, bunches, and wens, growing in the flesh; it is good also for the hemorrhoids, piles, or other knobs or kernels growing near the fundament. An ointment made hereof may be used for the above purposes when the fresh herb is not to be had. The distilled water of the whole plant, together with the root, may also be used for the aforesaid disorders; it drieth up the superfluous virulent moisture of hollow and corroding ulcers, and taketh away all redness, spots, and freckles, in the face, as also the scurf and blotches therein, and is used with good effect to cleanse the body of the leprosy.

F I L A P E N D U L A.

IT is by some called dropwort.

DESCRIPTION. It shooteth forth many leaves of various sizes, growing on each side of a rib, and much dented on the edges, somewhat resembling wild tansey or agrimony, but feeling much harder; among these rise up one or more stalks, two or three feet high, spreading into many other branches, each bearing several white sweet-smelling flowers, consisting of five leaves apiece, with small threads in the middle; they stand together in a tuft or umbel, each upon a small footstalk, and are succeeded by round chaffy heads, like buttons, which contain the seed. The root consists of many tuberous pieces, fastened together by many small, long, blackish, strings, which run from one to another.

PLACE. It groweth in many places of this kingdom, in the corners of dry fields and meadows, and also by hedge-sides.

TIME. They flower in June and July, and their seed is ripe in August.

GOVERNMENT AND VIRTUES. It is under the dominion of Venus. It is very effectual to open the urinary passages, and to help the stranguary, and all other pains of the bladder and reins, and to expel the stone and gravel, by taking the roots in powder, or a decoction of them in white wine, sweetened with sugar; the same also helpeth to expel the after-birth. The roots made into powder, and mixed with honey after the manner of an electuary, is good to be taken by those whose stomachs are swollen, breaking and expelling the wind which was the cause thereof, as also for all diseases of the lungs, as shortness of breath, wheezings, hoarseness of the throat, and the cough, and to expectorate cold phlegm. It is called drop-wort because it giveth ease to those who evacuate their water by drops.

FIG - TREE.

TO give a description of a tree so well known to almost every body who lives in this kingdom were needless; I shall therefore only observe, that it is much fitter for medicinal purposes than any other.

GOVERNMENT AND VIRTUES. The tree is under the dominion of Jupiter. The milk that issueth from the leaves or branches when they are broken, being dropped upon warts, taketh them away; the decoction of the leaves is exceeding good to wash sore heads with, nor is there scarcely a better remedy for the leprosy than this; it also clears the face of the morpew, and the body of white scurf, moist scabs, and running sores; if it be dropped into old fretting ulcers, it cleanseth out the moisture and closeth up the flesh. For the sake of convenience, an ointment may be made of the leaves whilst they are green, which will keep all the winter. A decoction of the leaves taken inwardly, or rather the syrup of them, dissolves congealed blood caused by falls or bruises, and is good for the bloody flux; the ashes of the wood made into an ointment with hog's lard, cureth kibes and chilblains; the juice, being put into a hollow tooth, easeth the tooth-ach, and, dropped into the ears, cureth the deafness and pains thereof. An ointment of the juice and hog's grease is an excellent remedy for the biting of a mad dog, or other venomous beasts. A syrup of the green fruit, is very good for coughs, hoarseness, shortness of breath, and all diseases of the breast and lungs; it is equally efficacious for the dropsy and falling sickness. It is reported, (but I cannot vouch for its veracity,) that a bull, be he never so mad, by being tied to this tree, will quickly become tame and gentle.

FLOWER - DE - LUCE.

IT also beareth the name of yellow water-flag.

DESCRIPTION. There are other flower-de-luces, from which this herb differs chiefly in the leaves; those of this plant are much longer and narrower, and of a sad green

green colour; in other respects there is little or no difference. The leaves all grow together, from the middle of which riseth the stalk, bearing on the top small yellow flowers, with three falling leaves, and other three arched that cover their bottoms; but, instead of the three upright leaves which are in the other kinds, in this there are substituted three very short leaves, which are followed by long triangular heads, each containing large and flattish seed. The root is long and slender, of a pale brownish colour on the outside, and of a hoar lightish colour within, having many hard fibres thereat, and of a harsh taste.

PLACE. It usually grows in watery ditches, ponds, lakes, and moor-sides, which are filled with standing or running waters.

TIME. It flowereth in July, and the seed is ripe in August.

GOVERNMENT AND VIRTUES. It is under the dominion of the Moon. The root is of a very astringent, cooling, and drying, nature, and thereby helpeth all lasks and fluxes, whether of blood or humours, as bleeding at the mouth, nose, or other parts, and the immoderate flooding of women's courses. The distilled water of the whole herb, flowers, and roots, is a sovereign remedy for weak eyes, being either dropped therein or cloths or sponges wet therewith and applied to the forehead; being also fomented on swellings and hot inflammations and cankers incident to women's breasts, also foul ulcers in the privy parts of either sex, it is very profitable. An ointment made of the flowers is better for these external applications.

FLAX - WEED.

CALLED likewise toad-flax.

DESCRIPTION. Our common flax-weed hath many stalks, thick set with long and narrow blue or ash-coloured leaves, and bearing from the middle upward a vast number of pale yellow flowers, of a strong unpleasant smell, with deeper yellow mouths, and blackish flat seed in round heads. The root is somewhat woody and white, especially the chief branch of it, which spreadeth itself many ways, having several fibres hanging thereto.

PLACE. This groweth in every part of this kingdom, and is to be found by the way-sides in meadows, banks, and borders.

TIME. It blossoms in summer, and the seed is ripe usually about the middle or latter end of August.

GOVERNMENT AND VIRTUES. Mars owns this herb. It is frequently used to provoke urine and to expel the abundance of those watery humours by urine which cause the dropsey. The decoction of the herb, with the leaves and flowers in wine, doth somewhat move the belly downwards, openeth obstructions of the liver, helpeth

eth the yellow jaundice, expelleth poison, provoketh women's courses, and driveth forth the dead child and after-birth. Being drunk with a drachm of the powder of the seed, or the bark of the root of wall-wort, mixed with a little cinnamon, for several days together, it is esteemed a singular remedy for the dropy; the juice of the herb, or the distilled water, dropped into the eyes, is a certain cure for all heat, inflammations, and redness, of them; the same, put into foul ulcers, whether cankerous or fistulous, with tents, or the parts washed or injected therewith, cleanseth them thoroughly from the bottom, and healeth them up with safety; it also cleanseth the skin of the morpew, scurf, wheals, pimples, or other spots and blemishes, either used by itself or with the powder of lupines.

FLEA - WORT.

DESCRIPTION. The ordinary flea-wort riseth up with a stalk about two feet high, though sometimes higher; full of joints and branches on every side, quite up to the top; at each of the joints grow two small, long, and narrow, whitish green leaves, which are somewhat hairy. At the tops of the branches stand several small, short, scaly, or chaffy, heads, out of which come forth small whitish yellow threads, somewhat like those of the plantane herbs, which are the blossoms or flowers. The seed contained in those heads is small and shining, and very much resembles fleas, both in size and colour, whilst it is fresh, but turns black as its age advances. The root is short, white, hard, and woody, perishing every year, and rising from its own seed, which it promiscuously sheds. The whole plant is rather whitish and hairy, smelling somewhat like rosin.

There is another sort hereof, differing not from the former in the manner of its growth, but the stalks and branches are somewhat greater, bending down towards the ground; the leaves are rather larger, the heads a little less, and the seed very much alike. The root and leaves abide all the year, and do not perish in the winter season like the former.

PLACE. The first groweth only in gardens, but the second plentifully in fields and pastures near the sea.

TIME. They flower in July, or thereabouts.

GOVERNMENT AND VIRTUES. The herb is cold and dry, and of a Saturnine quality. The seed fried and taken stayeth the flux or lask of the belly, and the corruptions that proceed from hot, choleric, sharp, and malignant, humours, or from too strong an operation of any medicine, as scammony, &c. The mucilage of the seed made with rose-water, and a little sugar-candy added thereto, is very good in all hot agues and burning fevers and inflammations; also to allay the thirst, and lenify the

dryness and roughness of the tongue and throat. It helpeth hoarseness of the voice, diseases of the breast and lungs, caused by heat or sharp salt humours, and also the pleurisy. The mucilage of the seed made with plantane-water, with the yolk of an egg and a little populeon added thereto, is a safe and sure remedy for the sharpness, prickings, and pains, of the hemorrhoids, or piles, if it be laid on a cloth and bound thereto. It healeth inflammations in all parts of the body, and the pains arising therefrom, as the head-ach, &c. It easeth the pains of imposthumes, swellings, and breakings-out, of the skin, as blains, wheals, pushes, purples, and the like; as also the pains of the joints, gout, sciatica, and dislocated members; and, applied with oil of roses and vinegar, it is good to help the bursting of young children, and the swelling of the navel. It is a good remedy for sore breasts and nipples of women; the juice of the herb with a little honey, put into the ears, helpeth the running and destroyeth the worms breeding therein; the same also mixed with hog's grease, and applied to corrupt and filthy ulcers, cleanseth and healeth them.

F L E A - B A N E.

NAMES. IT is called also in English mullet, and in Latin *conyza*.

GOVERNMENT AND VIRTUES. It is hot and dry in the third degree. The herb being spread under foot, or burnt and smoked in any place, will drive away venomous creatures, and will kill and destroy fleas and gnats. An ointment of the root and leaves is used with success for the itch.

F L I X - W E E D.

DESCRIPTION. IT riseth up with a round, upright, hard, stalk, four or five feet high, spreading into several branches, whereon grow many greyish green leaves, very finely cut, and severed into a number of short, and almost round parts. The flowers are very small and yellow, growing spike-fashion, after which come very long small pods, containing yellowish seed. The root is long and woody, perishing every year.

There is another sort of this plant, differing from the former only in the leaves, these being somewhat broader; both kinds are of a very disagreeable smell, and of a biting taste.

PLACE. They grow wild in fields and by hedge-sides and highways; also among rubbish, and other places.

TIME. They flower and seed in June and July.

GOVERNMENT AND VIRTUES. This herb is also Saturnine. The herb and seed is of excellent use to stay the flux and lask of the belly, being taken in water wherein gads.

gads of heated steel have been often quenched ; and is no less effectual for these purposes than plantane or comfrey, and to restrain any other flux of blood, either in man or woman ; as also to consolidate broken and dislocated bones. The juice thereof drunk in wine, or the decoction of the herb taken, killeth the worms in the stomach and belly, as also such as are sometimes seen in putrid and ulcerated wounds. Made into a salve, it is a good plaster for foul and malignant sores ; the distilled water of the herb answereth the same purposes, though somewhat weaker, yet is it esteemed a fine medicine, and often chosen in preference to the former. Syrups, ointments, and emplasters, of it, are truly valuable household medicines.

FLUELLIN.

DESCRIPTION. It shooteth forth many long branches, partly lying upon the ground, and partly standing upright, set with almost round leaves, yet a little pointed and sometimes bordering upon an oval shape, placed without order, somewhat hoary, and of an evil greenish white colour ; from the joints to the tops of the stalks, grow with the leaves, upon small short footstalks, small flowers, one at each place, opening or gaping like snap-dragons, or rather like toad-flax, with the upper part of a yellow colour, and the under of a purplish, with a small heel or spur behind ; after these come small round heads, containing small black seed. The root is small and thready, perishing annually, and rising again of its own sowing.

There is another sort which hath longer branches, wholly trailing upon the ground, two or three feet long, and sometimes not quite so thick set with leaves, which also grow upon small footstalks ; they are rather larger than the former, and sometimes jagged on the edges, but, the lower part being the broadest, and terminating in a small point, its shape does not bear the most distant resemblance to that of the ear of most animals ; it is somewhat hairy, but not hoary, and of a better green than the first. The flowers come forth like those aforementioned, but the colour of the upper part is rather white than yellow, and the purple not so fair ; the flower is every way larger, as are the seeds and seed-vessels. The root is like the other, and perisheth yearly.

PLACE. They grow in the borders and other parts of corn-fields and fertile grounds, especially near Southfleet in Kent ; and at Buckworth, Hamerton, and Rickmansworth, in Huntingdonshire, and in many other places.

TIME. They are in bloom about June or July, and the whole plant is dry and perished before September.

GOVERNMENT AND VIRTUES. It is a lunar herb. The leaves bruised, and applied with barley-meal to watering eyes that are hot and inflamed by defluxions from the head, help them exceedingly ; as also the flooding of blood and humours, as the
lask,

lask, bloody flux, women's courses, bleeding of the nose, mouth, or any other place, or proceeding from any bruise, wound, or bursting of a vein, and greatly helpeth such parts as need consolidating and strengthening; it is no less effectual in closing and healing green wounds, than in cleansing and curing foul and ulcerated sores, fretting and spreading cankers, &c.

FOX-GLOVE.

DESCRIPTION. IT hath many long and broad leaves lying upon the ground, dented about the edges, a little soft or woolly, and of a hoary green colour; among these grow up several stalks, but generally one which bears the aforesaid leaves from the bottom to the middle upwards, from whence to the top it is set with large and long, hollow, reddish, purple, flowers, being a little longer at the lower edge, and spotted with white on the inside; there are threads also in the middle, from whence rise round heads, pointed sharp at the ends, and containing small brown seed therein; they grow one above another, with small green leaves thereat, hanging their heads downward, and each turning the same way. The roots consist of small fibres, among which are some of a tolerable size. The blossoms are without smell, and the leaves are of a bitter hot taste.

PLACE. It groweth in dry sandy places, and as well on high as low grounds; also under the hedge-fides, in almost every part of this kingdom.

TIME. It seldom flowereth before July, and the seed is ripe in August.

GOVERNMENT AND VIRTUES. This herb is under the dominion of Venus. It is of a gentle cleansing nature, and is frequently used to heal fresh or green wounds, by bruising the leaves and binding them thereon, and the juice thereof is also used for old sores, to cleanse, dry, and heal, them. The decoction made with sugar or honey, is effectual in cleansing and purging the body, both upwards and downwards, of tough phlegm and clammy humours, and to open obstructions of the liver and spleen. It hath been found by experience to be available for the king's evil, the herb being bruised and applied, or an ointment made with the juice, and so used. A decoction of two handfuls thereof with four ounces of polypody, in ale, hath been found to cure those of the falling sickness who have been afflicted therewith for upwards of twenty years. It is a sovereign remedy for a fore head.

FUMITORY.

DESCRIPTION. OUR common fumitory is a tender sappy herb, sending forth, from one square, slender, weak, stalk, and leaning downwards on all sides, many branches two or three feet long, with leaves thereon of whitish, or rather bluish, sea-

green

green leaves, finely cut and jagged; at the tops of the branches stand many small flowers, one above another, forming a kind of spike, of a reddish purple colour, with whitish berries; these are succeeded by small round husks, which contain the seed. Its root is yellow, small, and not very long, full of juice while it is green, but perisheth as the seed ripens. In some parts of Cornwall there is a species of this plant which beareth white blossoms.

PLACE. It groweth generally in corn-fields and cultivated grounds, and is also a garden plant.

TIME. It flowereth in May, and the seed ripens soon after.

GOVERNMENT AND VIRTUES. Saturn claims dominion over this herb. The syrup or juice made hereof, or the decoction made in whey, with some other purging or opening herbs and roots added thereto, in order to strengthen its operation, (being of itself but weak,) is very effectual for the liver and spleen, opening the obstructions thereof, and clarifying the blood from saltish, cholerick, and malignant, humours, which cause leprosy, scabs, tetters, itch, and such-like breakings-out of the skin; and, after having performed these services, it strengthens all the inward parts. It cureth the yellow jaundice, and expelleth it by urine, which it procureth in abundance. The powder of the dried herb, given for some time together, cureth melancholy; but the seed is most effectual. The distilled water of the herb is also of good effect in the former diseases, and is an excellent preventative against the plague, being taken with good treacle; or, gargled with a little water and honey of roses, it helpeth the sores of the mouth and throat. The juice, dropped into the eyes, clear-eth the sight, and taketh redness and other defects therefrom. Dioscorides saith, it hindereth the hair from growing afresh on the eyelids, if they are anointed with the juice hereof having gum arabic dissolved therein. The juice of fumitory and docks mingled with vinegar, and the places gently washed or wet therewith, cureth all sorts of scabs, pimples, itch, wheals, or pufhes, which are incident to the face, hands, or any other part of the body.

FURZE - BUSH.

IT is so well known by this name, as also by that of goss, or whins, that a minute description would be totally useless.

PLACE. It is known to grow on dry barren heaths, and other waste, gravelly, and sandy, ground.

TIME. They flower in the summer-months.

GOVERNMENT AND VIRTUES. Mars owns this herb. It is hot and dry, and good to open obstructions of the liver and spleen. A decoction, made with the flowers,

is effectual against the jaundice, as also to provoke urine, and cleanse the kidneys from the gravel and stone.

FENUGREEK.

NAMES. IT is called in Latin *fœnum græcum*, or otherwise greek-hay.

DESCRIPTION. It groweth up with tender stalks, round, blackish, hollow, and full of branches; the leaves are divided into three parts, like those of trefoil; the flowers are pale or whitish, not much unlike the blossoms of lupines, but smaller. After these are fallen away, there follow long pods or husks, crooked and sharp pointed, wherein is contained the seed, which is of a yellowish colour. The root is full of small hanging hairs.

PLACE. It very seldom groweth in this kingdom, unless planted in the gardens of botanists.

TIME. It blossoms in July, and the seed is ripe in August.

GOVERNMENT AND VIRTUES. Fenugreek-seed is hot in the second degree, and dry in the first, and under the influence of the planet Mercury. The seed which is sold by druggists and apothecaries is only used in medicine. The decoction or broth of the seed, drunk with a little vinegar, expelleth and purgeth all superfluous humours which cleave to the bowels; the same decoction first made with dates, and afterwards made into a syrup with honey, mundifieth and cleanseth the breast, chest, and lungs, and may be taken with success for any grief attendant thereon, provided the patient be not afflicted with a fever or head-ach, as this syrup, being hurtful to the head, would rather increase than alleviate those disorders. It is of a softening and dissolving nature, therefore the meal thereof, being boiled in mead or honey-water, doth consume, soften, and dissolve, hard swellings and imposthumes; also a paste made thereof, with saltpetre and vinegar, doth soften and waste the hardness and swelling of the spleen. It is good for women who are afflicted with an imposthume, ulcer, or stoppage, in the matrix, to bathe and sit in a decoction thereof; also a suppository made of the juice of this plant, and conveyed to the neck of the matrix, will mollify and soften all hardness thereof. The decoction of fenugreek is an excellent wash for the head, as it cleanseth the head of every kind of dirt, viz. scurf, scales, dandriff, nits, &c. Applied with honey, it cleanseth the face and other parts of pimples, pushes, wheals, and other blemishes; it healeth the itch, and preventeth the disagreeable smell which oftentimes proceeds from perspiration. The seed, being prepared after the manner of lupines, and eaten, will gradually and gently purge the belly of costive humours.

FISTIC-NUTS.

NAMES. THESE nuts are also called in shops *pistacia*, *pistacies*, and *fistici*.

DESCRIPTION. The tree bearing these nuts hath long great leaves, spread abroad, consisting of five, seven, or more, leaves, growing one against another, upon a reddish rib or sinew; whereof the last, which is alone at the top of the leaf, is much the largest; the fruit is much like hazel-nuts, or kernels of the pine-apple.

PLACE. This tree is a stranger in this country, but is a native of Syria and other eastern countries.

GOVERNMENT AND VIRTUES. Fistic-nuts are under the influence of Jupiter. They are of a mean or temperate heat, and somewhat astringent; they are good to open stoppages and obstructions of the liver, and for strengthening the same; they are also good for the stomach, they open the pipes of the breast and lungs, and, being eaten either alone or with sugar, are exceeding good for the phtysic and shortness of breath. Dioscorides saith, that fistic nuts given in wine are an excellent remedy for the biting of venomous beasts.

F L A X.

NAMES. IT is called in Latin *linum*, by which name it is well known in shops; also *lin*, whence the cloth that is made thereof is called linen-cloth; its seed is called linseed, and the oil produced therefrom linseed-oil.

DESCRIPTION. Flax hath a tender stalk, covered with sharp narrow leayes, parted at the top into small short branches, which bring forth fair-blue flowers; these are succeeded by round knobs or buttons, containing a blackish, large, fat, and shining, seed.

PLACE. It is cultivated in this country, and sown in fine moist fertile grounds, especially such as lie low.

TIME. It flowereth in May and June, and ripens soon after.

GOVERNMENT AND VIRTUES. It is under the dominion of Venus; the seed of this plant, being only used in medicine, is hot in the first degree, and temperately moist and dry. The seed, or linseed, being boiled in water and applied as a poultice or plaster, asswageth all pains, softeneth cold tumours or swellings, the imposthumes of the neck and ears, and of other parts of the body. Linseed pounded with figs is good to ripen and bring to a head boils and other swellings; also to draw forth thorns and splinters, being mixed with the root of wild cucumber. The seed mingled with honey and cresses, and laid upon rough, rugged, and ill-favoured, nails, either of the hands or feet, cleanseth and clarifieth those that are corrupt; or, laid on the face, cleanseth

cleanseth and taketh away all spots and freckles thereof. The wine, wherein linseed hath been boiled, preserveth old sores and ulcers from corruption, being washed therewith, and from festering and inward rankling; the water wherein linseed hath been boiled, doth quicken and clear the sight, by being often dropped into the eyes. Used in clysters, it asswageth the griping pains of the belly, as well as of the matrix or mother, and cureth all wounds of the same. The seed mixed with honey, and taken as an electuary, cleanseth the breast, and helpeth the cough; compounded with raisins, it is good for such as are consumptive, or troubled with hectic fevers. The seed of lin taken in too great a quantity is injurious to the stomach; it engenders wind, and hinders digestion of meat.

F I R - T R E E.

NAMES. THIS tree is called in Latin *abies*, by the Dutch, *mastboom*, because of its utility in making masts for ships, and the liquid or clear rosin that issueth from the bark of the young trees is called *terebintina veneta*, but is generally known to us by the name of venice turpentine.

DESCRIPTION. The fir-tree is large, high, and long, and continues always green; it grows much higher than the pine or pitch-tree; the stalk is very even and straight, plain beneath and without joints, but upwards it grows with joints and knobs; upon these joints grow the branches, bearing leaves almost like yew, but smaller, longer, and sharper at the ends, of a bluish green colour; the fruit is like the pineapple, but smaller and narrower, not hanging down, but growing straight upward. From out of the bark of the young trees is gathered a fair liquid rosin, clear and shining, in taste bitter, almost like to citron-peel or lemon-peel condited. There is also found upon this tree a white rosin or gum, somewhat like that which the pine and pitch trees produce.

PLACE. It grows upon the high mountains in Greece, Italy, Spain, and France, and in many places of Germany and Norway; from whence the timber thereof is imported into this kingdom, for the purposes of building, &c.

GOVERNMENT AND VIRTUES. It is under the dominion of Mars. The bark and dry gum or rosin of this tree are in temperature and virtues like the bark and rosin of the pine-tree, but these of the fir-tree are of a more acrimonious and cleansing quality. The liquid or clear rosin is hot and dry in the second degree, of a sharp quality, and of a digestive or cleansing nature: this liquid, taken to the quantity of half an ounce, looseth the belly and expelleth all cholerick humours; it munitieth and cleanseth the kidneys and bladder, provoketh urine, expelleth the stone and gravel, and is good to be taken often by those who are troubled with the gout;

the

the ſame taken with nutmeg and ſugar, about the quantity of a nut, helpeth the ſtranguary, and is very good againſt excoriations or going off of the ſkin, or flux of the privities. It is alſo an excellent remedy for green wounds, eſpecially thoſe of the head, for it cleanſeth and healeth ſpeedily.

G A R L I C.

IT is ſo univerſally known, that I ſhall decline troubling my readers with any deſcription of it.

GOVERNMENT AND VIRTUES. Mars owns this herb. It provoketh urine and women's courſes, and helpeth the biting of mad-dogs and other venomous creatures; it killeth worms in children, cutteth and bringeth forth tough phlegm, purgeth the head, helpeth the lethargy, and is a good preſervative againſt, and a remedy for, any plague-ſore, or foul ulcer; it taketh away ſpots and blemiſhes of the ſkin, eaſeth pains of the ears, and ripeneth and breaketh impoſthumes and other ſwellings. It has been noticed that onions are equally effectual for the ſaid purpoſes, but garlic hath many peculiar virtues which the onion cannot boaſt of; for inſtance, it hath a ſpecial quality to remove all inconveniences proceeding from corrupt agues or mineral vapours, or from drinking ſtagnated or unclean water; as alſo by taking of wolf-bane, henbane, hemlock, or other poiſonous herbs. It is alſo exceeding good in hydropic diſeaſes, the jaundice, falling ſickneſs, cramps, convulſions, the piles or hemorrhoids, and other cold diſeaſes. However, having ſhewed its many virtues, it is alſo neceſſary that its vices ſhould not be concealed; its heat is very vehement, and every thing of that deſcription naturally conveys ill vapours to the brain; in cholerick caſes it adds fuel to the fire; in men oppreſſed with melancholy it extenuates the humour, and confounds the idea with ſtrange viſions and fancies, and therefore ought to be taken with the ſtricteſt care by thoſe whoſe ill-diſpoſition of body will not admit of a liberal application. A few cummin ſeeds, or a green bean or two, being chewed after eating garlic, will entirely remove the diſagreeable ſmell of the breath proceeding therefrom.

G E N T I A N.

CALLED alſo felwort and baldmony.

It is acknowledged that the gentian uſed by us ſome years ago was imported from beyond the ſea, but we have ſince happily found that our own country is by no means deficient of thoſe bleſſings which can contribute to the health of man. There are two ſorts of gentian the growth of this kingdom, which have been proved

by the experience of the most able physicians to be rather of superior excellence to that of the foreign herb.

DESCRIPTION. The greater of the two hath many long and small roots, which grow deep in the ground, and abide all the winter. The stalks grow several together, of a brownish green colour, which are sometimes two feet high, especially if the soil is good, having many long, narrow, dark-green, leaves, set by couples up to the top; the flowers are long and hollow, of a brightish purple colour, and ending in five corners.

The smaller kind groweth up with several stalks, not quite a foot high, parted into many branches, whereon grow two or three small leaves together, not unlike those of the lesser centaury, of a whitish green colour; on the top of the stalks grow divers perfect blue flowers, standing in long husks, but not so big as the other. The root is very small and thready.

PLACE. The former groweth in many places in the east and west counties, as at Longfield near Gravesend, also at Cobham, Lellingstone, and in the chalk-pits adjacent to Dartford in Kent.

The second kind groweth also in many places in Kent, as about Southfleet and Longfield; and upon the barren hills in Bedfordshire. It is likewise found not far from St. Alban's, on the road from Dunstable towards Gorhambury.

TIME. They bloom in August, and shed their seed soon after.

GOVERNMENT AND VIRTUES. They are under the dominion of Mars. They resist putrefaction, poison, and pestilence; nor is there a more excellent herb for strengthening the stomach, and helping digestion; it preserves the heart, and prevents fainting and swooning. The powder of the dried roots helps the bitings of venomous beasts, opens the obstructions of the liver, and restoreth lost appetite. Steeped in wine and drunk, it refresheth such as are weary with travelling; it helps stitches and griping pains in the sides, and is an excellent remedy for such as are bruised by falls; it provokes urine and the terms exceedingly, consequently should be avoided by pregnant women. The decoction is very profitable for those who are troubled with cramps and convulsions: also it breaks the stone, and is a great help for ruptures. It is good for cold diseases, and to expel tough phlegm; and cure all scabs, itch, and fretting sores and ulcers. It is an admirable remedy to destroy the worms in the body, by taking half a drachm of the powder in the morning in any convenient liquor, and is equally good for the king's evil. To help agues of all sorts, the yellow jaundice, and the bots in cattle, there is no herb superior to this. When kine are bitten on the udder by any venomous beast, if the affected parts are washed with a decoction hereof, it will prove a certain cure.

CLOVE-

CLOVE-GILLIFLOWERS.

TO describe this herb, it being so well known, would be altogether fruitless.

GOVERNMENT AND VIRTUES. They are fine temperate flowers, of the nature and under the dominion of Jupiter; even so temperate, that no excess, either in heat, cold, driness, or moisture, can be perceived in them. They are great strengtheners of the brain and heart, and will therefore make an excellent cordial for family purposes. Either the conserve or syrup of these flowers, taken at intervals, is good to help such whose constitution is inclinable to be consumptive. It is good to expel poison and help hot peccilent fevers.

GERMANDER.

DESCRIPTION. COMMON germander shooteth forth many stalks, with small and somewhat round leaves, dented on the edges; the flowers stand at the tops, of a deep purple colour. The root is composed of many sprigs, which shoot forth a great way round about, soon overspreading the adjacent ground.

PLACE. It groweth usually in gardens.

TIME. It flowereth in June and July, and the seed is ripe in August.

GOVERNMENT AND VIRTUES. It is an herb under the dominion of Mercury. It strengthens the brain and apprehension exceedingly, and relieves them when drooping; taken with honey, it is a remedy for coughs, hardness of the spleen, and difficulty of urine; or, made into a decoction and drunk, it helpeth those who are troubled with the dropsy, especially if taken at the beginning of the disorder. It also bringeth down women's courses, and expelleth the dead child; being drunk in wine and the bruised herb outwardly applied, it is a certain cure for the poison of serpents; used with honey, it cleanseth old and foul ulcers, and made into an oil, and the eyes anointed therewith, taketh away the moisture and dimness of them, and is good for the pains of the sides and cramps. The decoction thereof, taken for some days together, driveth away and cureth both the tertian and quartan agues; it is also good against all diseases of the brain, as continual head-ach, falling sickness, melancholy, drowsiness and dulness of the spirits, convulsions, and palsy. A drachm of the seed taken in powder purgeth by urine, and is good against the yellow jaundice; the juice of the leaves dropped into the ears killeth the worms in them; and the tops thereof, when they are in bloom, steeped twenty-four hours in a draught of white wine and drunk, kill and expel worms in the belly.

STINKING GLADWIN.

DESCRIPTION. THIS is a species of the flower-de-luce, having several leaves growing from the root, very much resembling those of the flower-de-luce, but that

they are sharper edged and thicker in the middle, of a deeper green colour, narrower and sharper pointed, and of a strong disagreeable smell if they are pressed between the fingers; in the middle riseth up a reasonable sized stalk, about a yard high, bearing three or four flowers at the top, made somewhat like those of the flower-de-luce, with three upright leaves, of a dead purplish ash-colour, with veins in them of a different colour; the other three leaves do not fall down, neither are the three small ones so finely arched, nor do they cover those at the lower part; in these particulars it differs somewhat from that aforesaid. These are succeeded by three-square hard husks, opening wide into three parts when they are ripe, wherein lie reddish seed, which in time turneth black. The root is like that of the flower-de-luce, but reddish on the outside and whitish within, of a very sharp and hot taste, and of an exceeding disagreeable smell.

PLACE. This groweth as well on the upland grounds as in woods and moist shadowy places, as also by the sea-side, in many parts of this kingdom, and is often cultivated in gardens.

TIME. It blossoms in July, and the seed is ripe in August and September; yet the husks, when they are ripe, will open themselves, and contain their seed two or three months before they shed it.

GOVERNMENT AND VIRTUES. It is supposed to be under the dominion of Saturn. A decoction of the roots purgeth corrupt phlegm and choler, but, when wanted to operate more gently, a few slices of the roots infused in ale will answer the purpose, though those whose stomachs will not admit of this make use of the leaves only. The juice hereof, snuffed up the nostrils, causeth sneezing, and thereby draweth from the head much corruption; or the powder thereof, used the same way, produceth the like effect. The powder, drunk in wine, helpeth those who are troubled with cramps and convulsions, or with the gout or sciatica, and easeth the gripings of the belly; it helpeth the stranguary, and cleanseth, purgeth, and stayeth, the sharp and evil humours which cause long fluxes. The root boiled in wine, and drunk, doth effectually procure women's courses, and, used as a pessary, worketh the same effect, but causeth abortion in women with child. Half a drachm of the seed, beaten to powder, and taken in wine, doth speedily cause an evacuation of urine; or, taken with vinegar, dissolveth the hardness and swellings of the spleen. The root is very effectual in all wounds, and particularly those of the head; as also to draw forth splinters, thorns, broken bones, or any other thing, sticking in the flesh, by being used with a little verdigrease and honey, together with the great centaury root. The same, boiled in vinegar, dissolveth and consumeth tumours and swellings; the juice of the leaves and roots healeth the itch, and cleanseth the skin from all blemishes.

GOLDEN ROD.

DESCRIPTION. IT groweth up with brownish, small, round, stalks, two feet high and sometimes more; having thereon many narrow and long dark green leaves, generally plain on the edges, and are sometimes, though very rarely, found with white streaks or spots thereon; the stalks are divided towards the top into many small branches, bearing thereon small yellow flowers, all which are turned one way; these, being ripe, are succeeded by a kind of down, which is carried away by the wind. The root consists of many small fibres, which grow but a little beneath the surface of the ground; it liveth for some years, shooting forth new branches yearly, which perish at the approach of winter.

PLACE. It grows in the open places of woods and coppices, both in moist and dry grounds, in many parts of this kingdom.

TIME. It flowereth about the month of July.

GOVERNMENT AND VIRTUES. Venus claims dominion over this herb. It is spoken of by Arnoldus de Villa Nova as a most excellent remedy for the stone in the reins and kidneys, as also to expel the gravel by urine. The decoction of the herb, either green or dry, or the distilled water thereof, is very effectual for inward bruises, likewise for staying the floodings of the body, as fluxes of humours, bloody fluxes, and the immoderate menses of women; and is most available in all ruptures or burstings, being internally or externally applied. It is a sovereign wound-herb, whereby green wounds and old ulcers are speedily cured; it is of particular efficacy in all lotions for sores or ulcers in the mouth, throat, or privities, of either sex. A decoction is serviceable to fasten the teeth when loose.

GOUT-HERB.

THIS herb is also frequently called herb gerrard.

DESCRIPTION. It is very low, seldom rising more than half a yard high; it consists of several leaves which stand on brownish green stalks, generally three together, snapped on the edges, and of a strong unpleasant smell. The umbels of flowers are white, and the seed blackish; the root runneth deep into the earth, and soon spreads itself over a great deal of ground.

PLACE. It groweth by hedge and wall sides, and often in the borders and corners of fields, and sometimes in gardens.

TIME. It flowereth in July, seeding about the latter end of the same month.

GOVERNMENT AND VIRTUES. Saturn is the ruler of this plant. It is probable it took the name of gout-herb from its peculiar virtues in healing the cold gout and

sciatica, as it hath been found by experience to be a most admirable remedy for these disorders; as also joint-achs, and other cold disorders. It is even affirmed, that the very carrying of it about in the pocket will defend the bearer from any attack of the aforefaid complaint.

G R O M E L.

OF this I shall briefly describe three kinds, which are chiefly used medicinally; the virtues of each are the same, but different in the manner of their growth.

DESCRIPTION. The greater gromel riseth up with slender, hard, and hairy, stalks, trailing and taking root as it lieth on the ground; it spreads itself by several small branches, whereon grow hairy dark green leaves. At the joints with the leaves grow many small blue flowers, which are succeeded by hard, stoney, roundish, seed.

The root is round and woody, and liveth during the winter, shooting forth fresh herbage every spring.

The small wild gromel groweth up with several straight, hard, branched, stalks, two or three feet high, full of joints, bearing at each, small, long, hard, and rough, leaves, very much like the former, but less. Among these leaves grow small white blossoms, which are followed by greyish round seed like the first. The root is not very large, but exceeding thready.

The garden gromel hath many upright, slender, woody, hairy, stalks, brown and crested, with but few branches, bearing leaves like the former; the flowers are white, after which cometh rough brown husks, containing white, hard, round, seed, shining like pearls, and greater than either of the former. The root is like that of the first, with many branches and strings thereat, and of long duration.

PLACE. The two first grow wild in barren and untilled places. The last is a nursling in the gardens of the curious.

TIME. They all flower from Midsummer till September, and the seed ripeneth quickly after.

GOVERNMENT AND VIRTUES. The dominion over these herbs is wholly claimed by Venus. They are of singular force in breaking the stone and expelling gravel, either in the reins or bladder; as also to provoke urine, and help the stranguary. The seed is most effectual for the above purposes, being bruised and boiled in white wine, or other convenient liquor; the powder of the seed is equally efficacious. Two drachms of the seed in powder taken with breast-milk, will procure a speedy delivery to women afflicted with hard travail, and that cannot be delivered. The herb itself, (when the seed is not to be had,) either boiled, or the juice thereof drunk, will answer all the aforefaid purposes, though not so powerful in its operation.

GOOSEBERRY-BUSH.

CALLED also feap-berry, and in Suffex dewberry-bush, and likewise in many places wine-berry.

GOVERNMENT AND VIRTUES. They are under the dominion of Venus. The berries, whilst they are unripe, being scalded or baked, are good to procure the return of a lost appetite, especially if the cause proceeds from a stomach afflicted with cholerick humours. They are exceeding good to stay the longing of pregnant women. The decoction of the leaves of the tree cools hot swellings and inflammations, as also the St. Anthony's fire. The ripe gooseberries, being eaten, are an excellent remedy to allay the violent heat of the stomach and liver; and the young and tender leaves break the stone and expel the gravel both from the bladder and kidneys. If they are taken immoderately, they are supposed to breed crude humours, and ingender worms.

WINTER-GREEN.

DESCRIPTION. IT shoots forth seven, eight, or nine, leaves, from a small, brownish, creeping, root, each standing upon a long footstalk; they are nearly as broad as they are long, round pointed, of a sad green colour, hard in handling, and somewhat like the leaf of a pear-tree. From among these riseth up a slender weak stalk, standing upright, bearing at the top many small, white, and sweet-smelling, flowers, laid open like a star, consisting of five round-pointed leaves, with many yellow threads standing in the middle, surrounding a green head, having a longish tube with them, which in time proveth to be the seed-vessel; when ripe, it is of a five-square shape, with a small point, containing seed as small as dust.

PLACE. It groweth but seldom in fields, but frequently in woods in the northern counties in this kingdom, as Yorkshire, Lancashire, &c.

TIME. It flowereth in June and July, shedding its seed soon after.

GOVERNMENT AND VIRTUES. Winter-green is under the dominion of Saturn, and is an excellent remedy for the speedy healing of green wounds, the leaves being bruised and applied, or the juice of them is equally effectual. A salve made of the bruised herb, or the juice boiled in hog's lard, or with salad-oil and wax, adding a little turpentine thereto, is a sovereign medicine, and in high estimation among the Germans, who use it to heal all manner of wounds, ulcers, and sores. The herb boiled in wine and water, and drunk by those who are troubled with ulcers in their kidneys, or neck of the bladder, wonderfully helpeth them. It stayeth all fluxes, whether of blood or humours, as the lask, bloody flux, immoderate menstrua, and bleeding

bleeding of wounds, and taketh away such inflammations as rise from the pains of the heart. It is no less available for foul ulcers that are hard to be cured, as also for cankers and fistulas. The distilled water of the herb will perform the same virtues, though not so speedily.

GROUNDSEL.

DESCRIPTION. OUR common groundsel hath a round, green, and somewhat brownish, stalk, spreading towards the top several branches, set with long and somewhat narrow green leaves, cut in on the edges, not much unlike the oak leaves, but less, and round at the ends; at the tops of the branches stand many small green heads, out of which grow yellow threads or thrums, which are the flowers: these continue many days thus blown before they are turned into down, which with the seed is carried away with the wind. Its root is small and thready, soon perishing, and as soon rising again from its own sowing.

PLACE. It grows almost every where, as well on the tops of walls as among all kinds of rubbish and rude grounds, but especially in gardens.

TIME. It may be seen in bloom at almost any time of the year, and, if permitted to occupy good ground, each plant will spring and seed at least twice in a year.

GOVERNMENT AND VIRTUES. This herb is influenced by Venus. It is a universal medicine for all diseases proceeding from heat, in whatever part of the body they may chance to happen; it is a safe and gentle purge for a foul stomach, operating each way. It is of a moist and cold nature, consequently causeth expulsion, and represseth the heat caused by the motion of the internal parts, through the effects of an emetic or other medicine. This herb, preserved either as a syrup, an ointment, or distilled water, is a medicine unrivalled in its efficacy for the cure of all hot diseases, both for its safety and speed. The decoction of this herb, as Dioscorides observes, made with wine, helpeth the pains of the stomach proceeding from choler; and the juice taken in drink, or the decoction in ale, gently performeth the same. It is good against the falling sickness, and jaundice; and a drachm given in oxymel, after using a little exercise, provoketh urine, and expelleth the gravel from the reins and kidneys; also it helpeth the sciatica, cholic, and pains of the belly. The people in Lincolnshire use this externally against pains and swellings; and, as they affirm, with great success.

GALINGAL.

DESCRIPTION. It hath long, hard, and narrow, leaves; the stalk is triangular, about a foot and a half high, bearing on the upper part several small leaves, from
among

among which grow spiky tops and white seed; the root is long, consists of many threads, which are much tangled one within the other.

PLACE. It groweth in low and moist grounds; it is seldom seen in this kingdom, unless such as is planted in gardens.

TIME. This herb bringeth forth its spiky tops and seed, together with its leaves, in June and July.

GOVERNMENT AND VIRTUES. It is a plant of Mars, and the root is hot and dry in the third degree. The roots boiled, and the decoction drunk, provoke urine, bring down the menfes, expel the stone, and are good for those who are troubled with the dropsy; the same is also good for the cough, the stings of scorpions, and bitings of venomous beasts. By bathing the belly with this decoction, it suppleth the hardness of the mother, and remedyeth the stoppings and coldness thereof. The powder of the root drieth up and healeth old running sores of the mouth and privities, being wet with wine, and laid thereon; and is an excellent ingredient for hot ointments and maturative plasters. Pliny says, that the seed of galingal drunk with water stoppeth the flux of the belly, and the immoderate floodings of the menstrua; but the greatest care must be taken in using it, as too great a quantity will cause a violent head-ach.

STOCK - GILLIFLOWERS.

KINDS AND NAMES. THERE are found two kinds of these flowers: the one is called the castle or stock gilliflower, which may be kept both winter and summer; the other is not so large, and is called the small stock gilliflower, which must be annually sown; they are called *leucoion*, and *viola alba*, or white violets, because the leaves are white; the leaves of the flowers are of various colours, and called by some writers *viola matroniales*, or dame's violets.

DESCRIPTION. These two plants are not much unlike the wall-flowers, but that their leaves are whiter and softer; however, I shall treat of them respectively.

The great castle or stock gilliflower beareth hard and straight leaves, about two feet long, by far longer and larger than the leaves of wall-flowers. The blossoms are of a fragrant or pleasant smell, somewhat like those of heart's ease, though much larger; sometimes of a white, sometimes of an ash, colour, some of a carnation, and others of a scarlet and purple colour. These are followed by long husks, containing flat and large seeds.

The small stock gilliflower has stalks somewhat like the former, with whitish, woolly, soft, leaves; the flowers are of a fine fragrant smell, and of various colours,

followed by seeded cods, and in every respect like the first, except being somewhat smaller. It is about a foot high, and perisheth yearly.

PLACE. They are sown and planted in most of our English flower-gardens, but are seldom found growing wild.

TIME. The great castle gilliflower blossoms in March and April, the second year after it is sown; but the smaller kind flowereth in July and August, the same year in which it is first sown.

GOVERNMENT AND VIRTUES. They are of temperature hot and dry, of a similar nature with the yellow or wall gilliflowers, and are plants of Mercury. The flowers of the stock-gilliflower, boiled in water and drank, are good to remove all difficulty of breathing, and help the cough; they also provoke the courses and urine, and, by bathing or sitting over the decoction, it causeth perspiration.

WALL OR YELLOW GILLIFLOWER.

NAMES. THIS flower is supposed to be of the violet species. It is a small bush or shrub, called in Latin *leucocia lutea*, and by the apothecaries *keyri*, in English yellow and wall gilliflowers.

DESCRIPTION. The yellow wall gilliflower is green both winter and summer; the stalks thereof are hard, and of a woody substance, and full of branches; the leaves are thick set thereon, long, narrow, and green; on the tops of the stalks grow the flowers, which are of a very fair yellow colour, of a strong but pleasant smell, and every flower is divided into four small leaves; after these are past, there come cods or husks, which contain large, flat, and yellow, seed.

PLACE. It grows in great quantities on the ruined walls of stone buildings, and is very often planted in gardens, though the garden kinds are generally double flowered, which gives them a peculiar beauty the other cannot boast of.

TIME. It generally flowers in March, April, and May.

GOVERNMENT AND VIRTUES. They are hot and dry plants of the Sun, whose influence they are under, being of subtil parts. Being dried, and boiled in water, it provokes urine, and bringeth down the terms; it helpeth the schirrus, or hard imposthumes of the matrix, by being fomented therewith; a plaster, made of the blossoms with oil and wax, is good to heal chaps of the fundament, and the falling down of the same; or, mingled with honey, cureth ulcers and sores of the mouth. Two drachms of the seed taken in wine is a sure specific for bringing down the menstrua, secundine, and dead child; or a pessary made of the same, and conveyed into the matrix, answereth the same purpose. The juice, dropped into the eyes, cleanseth them from spots and dimness; and the root, stamped with vinegar, and applied to the spleen, helpeth the hardness thereof.

GALL - OAK.

DESCRIPTION. THE strong gall-oak so named from the fruit it bears, doth not grow so large nor high as other oaks, but shorter and very crooked, with fair spreading branches; on these grow long leaves, very much cut in on the edges, and hoary underneath; this tree flowereth and beareth acorns, as also a round woody substance, which is called a gall, and the timber is of a very hard substance. There are several kinds of gall-oaks, some of them are much shorter than others, bearing leaves more or less cut or jagged on the edges, and producing a greater quantity of galls, and no acorns at all; some bear large galls, others small, some knobbed or bunched, and others smooth; each are of different colours, some white, others red, yellow, and green.

PLACE. These oaks grow frequently in Italy, Spain, and other hot countries.

TIME. They shoot forth their long catkins or blossoms early in the spring, which fall away for the most part before the leaves appear. The acorns are very seldom ripe before October.

GOVERNMENT AND VIRTUES. I shall here explain the use, virtues, and temperament, of the galls of these foreign trees only, as their acorns differ but little from those produced by our English oaks.

The small gall, called *omphacitis*, is dry in the third degree, and cold in the second; Saturnine, and of a four harsh nature. It is effectual in drawing together and fastening loose and faint parts, as the overgrowing of the flesh; it expelleth and drieth up rheums and other fluxes, especially those that fall upon the gums, almonds of the throat, and other places of the mouth.

The other whiter gall doth also bind and dry, but not so much as the former, having a less quantity of that four harshness in it, it is good against the dysentery or bloody flux. The decoction of them in water is of a mean astringency, but more powerful in harsh red wine; being set over, it remedyeth the falling of the mother, or the galls being boiled and bruised, and applied to the fundament when fallen, or to any swelling or inflammation, will prove a certain cure. The coals of burned galls, when quenched in wine or vinegar, are good to staunch bleeding in any place. They will dye the hair black, and are one of the chief ingredients for making ink; they are likewise used by dyers for making black dye.

The oak-apple is much of the nature of galls, though inferior in quality, but may be substituted for them with success to help rheums, fluxes, and other such-like painful distempers.

HEART'S

H E A R T's E A S E.

IT is called in Suffex panfies, and is so well known by almost every person that I shall decline troubling my readers with a description of it.

PLACE. Besides those which are cultivated in gardens, they grow wild in barren and unfertile grounds.

TIME. They flower and seed all the time of spring and summer.

GOVERNMENT AND VIRTUES. This is a Saturnine plant, of a cold, slimy, and viscous, nature. A strong decoction of the herb and flowers is an excellent cure for the venereal disorder, being an approved anti-venerean; it is also good for the convulsions in children, falling sickness, inflammations of the lungs and breast, pleurisy, scabs, itch, &c. It will make an excellent syrup for the aforesaid purposes.

A R T I C H O K E.

THE Latins call them *cineria*, and they are also termed *artichocus*.

GOVERNMENT AND VIRTUES. They are under the dominion of Venus. They are great provokatives to lust, yet stay the involuntary course of natural seed in man; the decoction of the root boiled in wine, or the root bruised and distilled in wine, and drunk, purgeth by urine exceedingly.

H A R T's T O N G U E.

DESCRIPTION. It consists of several leaves rising from the root, every one separately, folding themselves in their first springing, and spreading; when at their full growth, they are about a foot long, smooth and green, but hard and sappy in the middle, straked on the back athwart on both sides of the middle rib, with small and somewhat long brownish marks; the bottoms of the leaves are a little bowed on each side of the middle rib, and somewhat small at the end. The root is composed of many black threads, which are much entangled together.

TIME. It is green all the winter, having new leaves every year.

GOVERNMENT AND VIRTUES. Jupiter claims dominion over this herb. It is a singular remedy to strengthen the liver when weak, and ease it when afflicted; it is esteemed for its efficacy in removing the hardness and stoppings of the spleen and liver; also against the heat of the liver and stomach, as well as the last and bloody flux. The distilled water is good for the passions of the heart, and gargled in the mouth will stay the hiccough, help the falling of the palate, and stop the bleeding of the gums. It is a good remedy for the biting of serpents.

HAZEL-

H A S E L - N U T .

THEY are so well known to every boy, that they require no description.

GOVERNMENT AND VIRTUES. They are under the dominion of Mercury. The parched kernels made into an electuary, or the milk drawn from the kernels with mead or honeyed water, are very good to help an old cough; and, being parched, and a little pepper added thereto, and taken in drink, digest the distillations of rheum from the head. The dried husks and shells, to the quantity of about two drachms, taken in red wine, stay the lasks, and women's courses; but the red skin which covers the kernel is much more effectual for the latter purpose.

H A W K - W E E D .

DESCRIPTION. IT hath many large leaves lying on the ground, having many deep gashes on the edges, somewhat like those of the sow-thistle; from among these riseth up a hollow rough stalk, two or three feet high, branched from the middle upwards. On these are set, at every joint, several leaves cut but very little on the edges, bearing at the top many pale yellow flowers, consisting of small narrow leaves, broad pointed, and nicked in on the edges, set in a double row, and sometimes more, the outside leaves being the largest. These flowers are turned into down, bearing small brownish seed, which is blown away with the wind. The root is long and rather large, with many small fibres thereat. The whole plant is full of bitter milk.

PLACE. It groweth in many places, especially in fields and borders of pathways, in dry grounds.

TIME. It blossoms and disperseth its down in the summer months.

GOVERNMENT AND VIRTUES. Saturn claims dominion over this herb. Dioscorides says, it is cooling, somewhat dry and binding, and therefore good for the heat and gnawings of the stomach, for inflammations, and hot ague-fits. The juice thereof, taken in wine, helpeth digestion, expelleth wind, preventeth crudities from clogging the stomach, and causeth an easy evacuation of urine; being outwardly applied, it is a sovereign cure for the stinging and biting of venomous beasts, and is good for all poisons. A scruple of the dried juice, taken in wine and vinegar, is profitable for the dropsy; the decoction of the herb, taken with honey, digesteth thin phlegm in the chest and lungs, and, mixed with hyssop, it helpeth the cough. The decoction hereof, mixed with that of wild succory made with wine, and taken, helpeth the wind-cholic and hardness of the spleen, procureth rest and sleep, preventeth venery, cooleth heats, purgeth the stomach, encreaseth blood, and helpeth

all diseases of the reins and bladder. Applied externally, it is a singular remedy for all defects and diseases of the eyes, being used with breast milk; and is of equal success when administered to fretting and creeping ulcers, if taken in time. The green herb bruised, and mixed with a little salt, is effectual in helping burns, if it be used before the blisters rise; also inflammations, St. Anthony's fire, and all pushes and eruptions, heat and salt phlegm. The same applied with meal and fair water, in the manner of a poultice, to any place affected with convulsions and the cramp, or dislocated members, giveth great help and ease. The distilled water cleanseth the skin from all blemishes. The use of this herb is mostly external, but it is very eminent; it cools, softens, and heals. I saw this year an arm covered with fiery pustules on the one half, and the other with terrible remains of scratching, cured by it in four days; the leaves were beat to a poultice with bread, milk, and a little oil, and tied round the arm.

HAWTHORN.

I DO not mean to trouble my readers with the description of a tree so universally known to almost every inhabitant of this kingdom.

It is generally a hedge-bush, but, by being carefully pruned and dressed, it will grow to a reasonable height. As for the hawthorn-tree of Glastonbury, which is said to flower yearly on Christmas-day, it rather shews the superstition of those who entertain this opinion than excites wonder on any other account, since the same may be found in many other places of this kingdom; as at a place called White-green, near Namptwich in Cheshire; and also in Romney-marsh. These, if the winter happens to be mild, will be in full bloom about Christmas.

GOVERNMENT AND VIRTUES. It is a tree of Mars. The berries, or the seed in the berries, beaten to powder and drunk in wine, are a singular remedy for the stone, and no less effectual for the dropsy. The distilled water of the flowers stayeth the lask; and the seeds, cleeted from the down, then bruised and boiled in wine, will give instant relief to the tormenting pains of the body. If cloths and sponges are wet in the distilled water, and applied to any place wherein thorns, splinters, &c. are lodged, it will certainly draw them forth.

HEMLOCK.

DESCRIPTION. THE common great hemlock groweth up with a green stalk, four or five feet high, and sometimes higher, full of red spots; at the joints are set very large winged leaves, which are divided into many other winged leaves, set one again

against another, dented on the edges, and of a sad green colour. The stalks are branched towards the top, each bearing umbels of white flowers, which are followed by whitish flat seed. The root is long, white, hollow, and sometimes crooked, of a very strong, heady, and disagreeable, smell.

PLACE. Its growth is not confined to any particular spot in this kingdom, but it may be found by most old walls, hedge-sides, and uncultivated grounds.

TIME. It generally flowereth and seedeth in July.

GOVERNMENT AND VIRTUES. Saturn governs this plant. It is exceeding cold, and of a very dangerous quality, consequently must not be applied internally. It is of good effect for inflammations, tumours, and swellings of any part of the body, the privities excepted; also St. Anthony's fire, wheals, pushes, and creeping ulcers, proceeding from hot sharp humours, by cooling and repelling the heat. The leaves bruised, and laid to the brow or forehead, are good for those whose eyes are red and swelled, and for cleansing them of web or film growing thereon. If the root is roasted in embers, afterwards wrapped in double wet papers, and then applied to any part afflicted with the gout, it will speedily remove the pain thereof. Should any person unfortunately, through mistake, eat the herbage of this plant instead of parsley, or the root instead of a parsnip, (both bearing a great resemblance to each other,) it will certainly cause a phrenzy or stupefaction of the senses; I will recommend to the patient the strongest and best wine they can procure, and to drink it immediately, before the ill effects of the herb strike to the heart. If wine cannot be instantly had, Pliny adviseth to take a good draught of strong vinegar, which he affirms to be a sovereign remedy.

H E M P.

IT is so common a plant, and so well known by almost every resident of this kingdom, that a description of it would be altogether superfluous.

TIME. It is sown about the latter end of March or beginning of April, and is ripe in August and September.

GOVERNMENT AND VIRTUES. It is under the dominion of Saturn. The seed consumeth wind, but if used too liberally it drieth up the natural seed for procreation, though, being boiled in milk, and taken a little at a time, it is a good remedy for a dry cough. An emulsion made of the seed is given with good success for the jaundice, especially in the beginning of the disease, if there be no ague accompanying it, for it openeth obstructions of the gall, and causeth digestion of choler; it stayeth lasks and continual fluxes, easeth the cholic, allayeth the troublesome humours of the bowels, and stayeth bleeding at the mouth, nose, or any other place; it will

destroy

destroy the worms either in man or beast, and by dropping the juice into the ears, it will kill the worms and bring forth earwigs or other insects gotten therein. The decoction of the root allayeth inflammations, easeth the pains of the gout, the hard tumours or knots in the joints, the pains and shrinkings of the sinews, and the pains of the hips. The fresh juice, mixed with a little oil and butter, is an exceeding good cure for burns.

H E N - B A N E.

DESCRIPTION. THE common hen-bane hath very large, thick, soft, woolly, leaves, lying upon the ground, much cut or torn on the edges, of a dark, ill, greyish-green, colour; from among these rise up several thick and short stalks, two or three feet high, spread into many smaller branches with less leaves thereon, bearing small yellow flowers, which scarce appear above the husks; they are usually torn on the one side, ending in five round points growing one above another, of a dead yellowish colour, somewhat paler toward the edges, with many purpleish veins, and of a dark yellowish purple colour at the bottom of the flower, with a small pointel of the same colour in the middle; each of them stands in a hard close husk, somewhat like those of asarabaca, and rather sharp at the top points, containing much small seed, very like poppy-seed, but of a dusky greyish colour. The root is large, white, and thick, branching forth many ways under ground, not much unlike a parsnip, except in colour, and is, together with the plant, of a very strong, disagreeable, and offensive, smell.

PLACE. It generally groweth near pathways, and under the sides of hedges and old walls.

TIME. It blossoms in July, and springeth annually from its own sowing; though many believe it to flower much earlier.

GOVERNMENT AND VIRTUES. It is a Saturnine plant. The leaves are good for cooling hot inflammations in the eyes, or other parts of the body; and, being boiled in wine, and used as a foment, it will assuage all manner of swellings, either in the scrotum, women's breasts, or other parts of the body; also the gout, sciatica, and pains of the joints, if proceeding from a hot cause. Being applied with vinegar to the forehead and temples, it helpeth the head-ach, and causeth those to sleep who are prevented by hot violent fevers. The oil of the seed is good for deafness, and noise and worms in the ears. The juice of the herb or seed, or the oil drawn from the seed, will answer all the aforesaid purposes.

H E D G E - H Y S S O P.

DESCRIPTION. THERE are several sorts of this plant, the first of which is a native of Italy, and only reared here by the curious. Two or three kinds however grow

grow wild in England, two of which I shall here mention; viz. The first is a low smooth plant, not quite a foot high, of a very bitter taste, composed of many square stalks, diversely branched from the bottom to the top; it has many joints, shooting forth at each two small leaves; these are rather broader at the bottom than at the top, a little dented on the edges, of a sad green colour, and full of veins. The flowers stand also at the joints, being of a fair purple colour with white spots, and made very much like those of dead-nettle; the seed is small and yellow, and the roots spread much under ground.

The second seldom grows more than half a foot high, shooting forth several small branches, whereon grow many small leaves set one against the other, somewhat broad, but very short; the flowers are not much unlike the former in shape, but of a pale reddish colour; the seed is small and yellowish, and the root spreadeth like that of the first.

PLACE. They grow in wet low grounds, and by water-sides, and the latter sort may be found amongst the bogs on Hampstead Heath.

TIME. They generally flower in June, July, and August, and the seed ripens presently after.

GOVERNMENT AND VIRTUES. They are under the dominion of Mars. They are very unsafe to take inwardly, unless well rectified by an alchymist, and only the purity of them given, as they are violent purgers, especially of choler and phlegm. Being prepared, they are very good for the dropsy, gout, and sciatica; externally applied in ointments, or the belly anointed therewith, they destroy worms therein, and are an excellent remedy for old and filthy sores.

BLACK HELLEBORE.

IT is called also fetter-wort, fetter-grass, bear's foot, Christmas-herb, and Christmas-flower.

DESCRIPTION. It hath many fair green leaves rising from the root, each of them standing about a span high from the ground; the leaves are all divided into seven, eight, or nine, parts, dented from the middle to the point on both sides, and remain green all the winter. About Christmas time, if the weather be somewhat temperate, the flowers appear upon footstalks, each composed of five large, round, white, leaves, which are sometimes purple toward the edges, with many pale yellow thrums in the middle. The seed is divided into several cells, somewhat like those of columbines, but rather larger; the seed is long and round, and of a black colour. The root consists of numberless blackish strings, all united into one head. There is likewise another species of black hellebore which frequently grows in woods and forests,

very much like this, except that the leaves are smaller and narrower. It perisheth in the winter.

PLACE. The first is cultivated in gardens ; the second is commonly found in the woods in Northamptonshire.

TIME. The former blossoms in December and January ; and the latter in February and March.

GOVERNMENT AND VIRTUES. It is an herb of Saturn, consequently would be taken with greater safety after being purified than when raw. The roots are very effectual against all melancholic diseases, especially such as are of long standing, as quartan agues and madness ; it helpeth the falling sickness, the leproly, the yellow and black jaundice, the gout, sciatica, and convulsions ; or, used as a pessary, provoketh the terms exceedingly. The same being beaten to a powder, and strewed upon foul ulcers, consumes the dead flesh and instantly heals them ; it will also help gangrenes by taking inwardly twenty grains thereof corrected with half as much cinnamon. Country people use it for the cure of such beasts as are troubled with the cough, or have taken any poison, by boring a hole through the ear and putting a piece of the root therein ; this, they say, will give relief in twenty-four hours time. It is an excellent ingredient, and used by farriers for many purposes.

HERB - ROBERT.

DESCRIPTION. IT grows up with a reddish stalk about two feet high, bearing on long and reddish footstalks many leaves ; these are divided at the ends into three or five divisions, some cut deeper than others, and also dented on the edges, which oftentimes turn of a reddish colour. At the top of the stalk grow several flowers, each consisting of five leaves, much larger than those of dove's foot, and of a deeper red colour, after which come beak-heads as in others. The root is small and thready, and of an unpleasant smell.

PLACE. It may be found near way-sides, ditch-banks, and waste grounds.

TIME. It flowers in June and July, and the seed is ripe soon after.

GOVERNMENT AND VIRTUES. This herb is under the dominion of Venus. It is esteemed an excellent remedy for the stone, and will stay blood, from whatever cause it might happen to flow ; it speedily healeth all green wounds, and is effectual in curing old ulcers in the privities and other parts.

HERB - TRUE LOVE.

DESCRIPTION. ORDINARY herb-truelove hath a small creeping root running near the upper crust of the ground, somewhat like a couch-grass root, but not so white,

white, shooting forth stalks with leaves, some of which carry small berries, and others not; every stalk smooth, without joints, and of a blackish green colour, rising about half a foot high if it bears berries, but not so high if otherwise; on the top are four leaves set directly one against the other, resembling a cross, or rather a ribbon tied in a true love's knot, from whence it took its name; these leaves are somewhat like the leaves of night-shade, but a little broader, having sometimes three leaves, sometimes five, and frequently six, some of which are larger than others. From the middle of the four leaves riseth up one small slender stalk, about an inch high, bearing on the top a flower spread open like a star, consisting of four small and long narrow pointed leaves, of a yellowish green colour, with four smaller ones lying between, and in the middle stands a round, dark, purplish, button, or head, compassed about with eight small yellow mealy threads of three colours, which form a beautiful flower; when the other leaves are withered, the button or head in the middle becomes a blackish purple berry about the size of a grape, full of juice, and contains many white seeds. The whole plant is without taste.

PLACE. It grows in woods and coppices, especially about Chislehurst and Maidstone in Kent, and is likewise frequently found in the corners and borders of fields, and other waste grounds.

TIME. They spring up about April or May, and flower soon after; the berries are ripe in the end of May and June.

GOVERNMENT AND VIRTUES. This plant is claimed by Venus. The leaves or berries hereof are effectual to expel poison of all sorts, especially that of the aconites, also the plague, and other pestilential diseases. The roots beaten to powder, and taken in wine, give ease to those who are troubled with the cholic; the leaves are exceeding good for green wounds, as also to cleanse and heal up old filthy sores and ulcers. It is very powerful to disperse all tumours and swellings in the scrotum, privities, or groin, or in any other part of the body, and speedily allays all inflammations. The leaves or juice applied to felons, or nails of the hands or feet that have imposthumes or sores gathered together at the roots or under them, will prove a certain cure in a short time.

H Y S S O P.

IT is so universally known, that I consider it altogether needless to write any description of it. Its virtues are these.

TEMPERATURE AND VIRTUES. The herb is Jupiter's, under the sign Cancer, consequently strengthens such parts of the body as these govern. Dioscorides saith, that hyssop boiled with rue and honey, and drunk, helpeth those who are troubled with coughs,

coughs, shortness of breath, wheezing, and rheumatic distillations of the lungs; taken with oxymel, it expelleth gross humours by stool; and with honey it killeth worms in the belly; also, with fresh or new figs bruised, it helpeth to loosen the belly, but more effectually if the root of flower-de-luce be added thereto. It restoreth the natural colour of the skin when discoloured by the yellow jaundice, and being taken with figs and nitre it helpeth the dropsy and spleen. Being boiled in wine, it is good to wash inflammations, and taketh away black and blue spots and marks proceeding from blows, bruises, or falls, if applied with warm water. Being boiled with figs, it makes an excellent gargle for the quinsy or swelling in the throat; or boiled in vinegar and gargled in the mouth it cureth the tooth-ach; the hot vapours of the decoction, taken by a funnel in at the ears, easeth the inflammations and ringing noise of them; bruised and mixed with salt, honey, and cummin-seed, it is a good remedy for the stinging of serpents; the head being anointed with the oil thereof, it killeth the lice and allayeth the itching of the same; it helpeth the falling sickness, and expelleth tough phlegm, and is effectual in all cold griefs or diseases of the chest and lungs, being taken either as a medicine or syrup. The green herb bruised, and a little sugar mixed therewith, will speedily heal up any cut or green wound, being thereto applied.

H O P S.

THE matured hops are so well known, that I shall decline writing a description, and shall therefore proceed to that of the wild hops.

DESCRIPTION. The wild hop groweth up like the tame, twining upon trees and hedges that stand near it; it hath rough branches and leaves like the former, but much smaller heads; these heads are so scarce, that one stalk seldom produces more than one or two;---in this the chiefest difference consists.

PLACE. They delight to grow on low moist grounds, and are found in most parts of this kingdom.

TIME. They spring up in April, and flower about the latter end of June, but the heads are not gathered till the latter end of September.

GOVERNMENT AND VIRTUES. It is under the dominion of Mars. This physically operates in opening obstructions of the liver and spleen, cleansing the blood, loosening the belly, expelling the gravel, and provoking urine; the decoction of the tops of hops, whether tame or wild, worketh these effects. In cleansing the blood, they help to cure the French disease, and all manner of scabs, itch, and other breakings-out of the body; also tetters, ringworms, and spreading sores, the morpew, and all discolourings of the skin. The decoction of the flowers and tops helpeth to expel poison.

poison. Half a drachm of the seed in powder, taken in drink, killeth worms in the body, bringeth down women's courses, and expelleth urine. A syrup, made of the juice and sugar, cureth the yellow jaundice, easeth the head-ach proceeding from heat, and tempereth the heat of the liver and stomach; it is likewise given with good effect to those who are afflicted with long and hot agues. Both the wild and the manured are of one property, and alike effectual in all the aforesaid disorders. Mars owns this plant, consequently its operations are obvious.

HOARHOUND.

DESCRIPTION. COMMON hoarhound groweth up with square hoary stalks, about half a yard or two feet high, set at the joints with two round, crumpled, rough, leaves, of a dull, hoary, green, colour, of a tolerable pleasant smell, but a very bitter taste. The flowers are small, white, and gaping, set in rough, hard, prickly, husks; these, together with the leaves, surround the joints from the middle of the stalk upwards, and are succeeded by small, round, blackish, seed. The root is blackish, hard, and woody, with many strings, and very durable.

PLACE. It is found in most parts of this kingdom, especially in dry grounds and waste green places.

TIME. It generally blossoms in and about July, and the seed is ripe in August.

GOVERNMENT AND VIRTUES. It is an herb of Mercury. A decoction of the dried herb with the seed, or the juice of the green herb taken with honey, is a certain remedy for those who are pursey or short-winded, or have a cough, or are fallen into a consumption, either through long sickness, or thin distillations of rheum upon the lungs. It helpeth to expectorate tough phlegm from the chest, being taken with the roots of iris or oris. It bringeth down the menstua, expelleth the afterbirth, and giveth ease to those who are afflicted with long and painful travail; and is an excellent medicine to expel poison, or cure the venomous bitings or stings of serpents, &c. The leaves, used with honey, purge foul ulcers, stay running or creeping sores, the growing of the flesh over the nails, and ease the pains of the sides. The juice thereof, used with wine and honey, helpeth to clear the eyesight, and, snuffed up the nostrils, purgeth away the yellow jaundice; the same, used with a little oil of roses and dropped into the ears, easeth the pains thereof. Galen says, it openeth obstructions both of the liver and spleen, and purgeth the breast and lungs of phlegm; or, outwardly applied, it both cleanseth and digesteth. The decoction of this plant is particularly recommended as a certain remedy for consumptive cases, as also to remove long and tedious coughs, and restore breath to those who are short-

winded. Mathiolus also observes a decoction of this plant to be infinitely serviceable for those who have bad livers, and for such as have itches and running tetter. Either the powder or the decoction hereof is effectual in killing worms. The green leaves, bruised and boiled in old hog's grease, and used as an ointment, heal the bitings of dogs, abate the swellings of women's breasts, and ease the painful swellings occasioned by thorns or splinters, and, used with vinegar, cleanse and heal tetter. There is a syrup made of this plant, sold by most apothecaries, which I would recommend as an excellent help to evacuate tough phlegm and cold rheum from the lungs of aged persons, especially those who are asthmatic or short-winded.

H O R S E - T A I L.

OF this there are many kinds, but I shall decline troubling my reader with the description of any other than the most eminent.

DESCRIPTION. The great horse-tail, at the first springing, hath heads somewhat like asparagus, which afterwards grow to be hard, rough, hollow, stalks, jointed in several places, and about a foot high; the lower part appearing to be put into the upper. On each side grows a bush of small, long, rush-like, hard, leaves, each part resembling a horse's tail, (from whence it took its name.) At the tops of the stalks come forth small catkins, somewhat like those of trees. The root creepeth under the ground, having many joints.

PLACE. This horse-tail (as do most of the other kinds hereof) generally groweth in moist and wet grounds.

TIME. They spring up in April, and their catkins bloom in July; in August they shed their seed, and then perish, rising afresh every spring.

GOVERNMENT AND VIRTUES. Of this herb, the smooth rather than the rough, and the leaved rather than the bare, are most physical. Saturn claims dominion over it, yet its qualities are very harmless. It is very good to stanch bleedings, either inwardly or outwardly, the juice or decoction thereof being drunk, or externally applied. It stays lasks and fluxes of every kind, either in men or women; suppresses the evacuation of blood through the urinary passages, and healeth not only the inward ulcers and excoriations of the entrails, bladder, &c. but all other sorts of foul, moist, and running, ulcers, and quickly healeth green wounds. It is an excellent cure for ruptures in children. The decoction, taken in wine, provoketh urine, and helpeth the stone and stranguary; and a small quantity of the distilled water thereof, drunk two or three times in a day, easeth the disagreeable sensations of the bowels, and is effectual against a cough when proceeding from the distillation of the head. By bathing the parts affected with the warm juice or distilled water

of this plant, it cureth hot inflammations, pustules, red wheals, and other breakings-out of the skin; and it easeth all swellings, heat, and inflammations, of the fundament and privities of either sex.

HOUSELEEK.

IT is too well known, as well by the name of sengreen as houseleek, to require any description.

PLACE AND TIME. It grows commonly on the tops of houses and walls, and flowers in July.

GOVERNMENT AND VIRTUES. Jupiter claims dominion over this herb, from which it is fabulously reported, that it preserves whatever it grows upon from fire and lightning. The ordinary houseleek is good for all inward and outward heats, either in the eyes or other parts of the body. A posset made with the juice of houseleek is singularly good in all hot agues, for it cooleth and tempereth the blood and spirits, and quencheth thirst; by dropping the juice thereof into the eyes, it cureth them of all hot defluxions of sharp and salt rheums, and is equally effectual for all disorders of the ears, being used in the same manner. It stoppeth the immoderate floodings of the menstrua, and helpeth the humours of the bowels; it cooleth and abateth all hot inflammations, the St. Anthony's fire, scaldings, burnings, the shingles, fretting ulcers, cankers, tetters, ring-worms, and the like; and is a certain ease to those who are afflicted with the gout, when proceeding from a hot cause. By bathing the hands and feet with the juice, and laying the skin of the leaves on them afterwards, it cleanseth them of warts and corns; it also easeth the head-ach and distempered heat of the brain, occasioned by phrensies or want of sleep, being applied to the temples and forehead. The leaves bruised, and laid upon the crown of the head, stay the bleeding of the nose very quickly. The distilled water of the herb is likewise profitable for all the aforesaid purposes. The leaves, being gently rubbed on any place stung with nettles or bees, do quickly take away the pain, and discharge the blisters proceeding therefrom.

HOLLY.

CALLED also holm or hulver-bush. It is so well known, that to give a description of it is quite needless.

GOVERNMENT AND VIRTUES. This tree is of a Saturnine quality; the berries expel wind, and are therefore esteemed good for removing the pains of the cholic; they are of a strong nature; for, by eating a dozen of them in the morning fasting,
when

when they are ripe, and not dried, they purge the body of gross and clammy phlegm; but, if you dry the berries and beat them into powder, they are binding; they stop fluxes of every kind, as also the terms of women. Both the bark and leaves are exceeding good to be used in fomentations for broken bones and dislocated members. The method of making Birdlime.---Peel as much of the bark of holly as you have occasion for, in the months of June and July; let it boil seven or eight hours, or till it is tender, in clear water, then make a heap with fern, strewing a lay of one and a lay of another. This sort of position the chymists term *stratum super stratum*, and mark it thus, S. S. S. Let it ferment a fortnight or three weeks; then take it out and beat it in a mortar till it may be kneaded like dough; then wash it in water till it becomes clean---This is pure birdlime.

HOUND'S TONGUE.

DESCRIPTION. THE great ordinary hound's tongue hath many long and somewhat narrow, soft, hairy, darkish-green, leaves, lying on the ground, and not much unlike those of bugloss; from among these riseth up a rough hairy stalk, about two feet high, with smaller leaves thereon, and branched at the top into many parts, bearing at the foot of each a small leaf; on this branch are many flowers, which consist of small purplish red leaves, of a dead colour, scarcely rising out of the husk wherein they stand, with a few threads in the middle. It hath sometimes a white flower. After the flowers are fallen, there follow rough flat seed, with a small pointel in the middle, easily cleaving to any thing it happens to touch. The branch whereon these flowers grow is crooked, or turned inwards, before they are in blossom, but straightens itself as the flowers come to perfection. The root is black, thick, and long, hard to break, and full of clammy juice, smelling somewhat strong and disagreeable, as do also the leaves.

PLACE. It groweth in most parts of this kingdom, in waste grounds, untilled places, highway-sides, and under hedges.

TIME. It generally flowereth in the months of May and June, and the seed is ripe shortly after.

GOVERNMENT AND VIRTUES. It is a plant under the dominion of Mercury. The root is very effectually used in pills and decoctions, or otherwise, to stay all sharp and thin defluxions of rheum from the head into the eyes or nose, or upon the stomach or lungs, as also for coughs and shortness of breath. The leaves boiled in wine, (though many approve of water,) with oil and salt added thereto, mollify and open the belly downwards, and help to cure the biting of a mad dog, by applying the leaves to the wound. Bruising the leaves, or the juice of them

boiled

boiled in hog's lard, and applied, helpeth to preserve the hair from falling, and easeth the pain of a scald or burn; or the bruised leaves, laid to any green wound, speedily heal the same. The root baked in embers, wrapped in paste, or wet papers, or in a wet double cloth, and a suppository made thereof and applied to the fundament, doth very effectually help the piles or hemorrhoids; also the distilled water of the herb and root is used with good effect for all the aforesaid purposes, either taken inwardly or applied outwardly, especially as a wash for wounds and punctures, and particularly ulcers occasioned by the venereal disease.

St. JOHN'S WORT.

DESCRIPTION. THE common St. John's Wort shooteth forth brownish, upright, hard, round, stalks, two feet high, spreading many branches from the sides up to the top, with two small dark-green leaves set one against another, somewhat like those of the smaller centaury, but narrower, and full of small holes, which can scarcely be discerned unless held up towards the light. At the tops of the stalks and branches stand yellow flowers, each composed of five leaves, with many yellow threads in the middle, which, being bruised, yield a reddish juice like blood; these are succeeded by small round heads containing small blackish seed, smelling like rosin. The root is hard and woody, with many strings and fibres, and of a brownish colour; they live many years, shooting afresh yearly.

PLACE. It groweth in woods and coppices, as well those that are shady as those that are open and exposed to the sun.

TIME. They flower about midsummer, and their seed is ripe in the latter end of July and August.

GOVERNMENT AND VIRTUES. It is under the celestial sign Leo, and governed by the Sun. It is by no means the least valuable for its efficacy in the cure of wounds, hurts, or bruises, by being boiled in wine and drunk, if the complaint is inwardly, or, if outwardly, by converting it into an oil, ointment, bath, or lotion. It openeth obstructions, dissolves swellings, closes up the lips of wounds, and strengthens the parts that are weak and feeble. The decoction of the herb and flowers, (though that of the seed is preferable,) taken in wine, or the seed made into powder and drunk with the juice of knot-grass, helpeth all manner of vomiting and spitting of blood, occasioned by the bursting of a vein, bruises, falls, &c. It likewise helpeth those who are bitten or stung by any venomous creature; also easeth the pain of the stone, and, when applied, provoketh women's courses. Two drachms of the seed of this herb, beaten to powder and drunk in a little broth, gently expel choler or congealed blood from the stomach. The decoction of the leaves and seeds, being

drunk rather warm before the ague-fits come on, in the course of a little time will entirely remove them. Drinking the decoction of the seed for forty days together helpeth the sciatica, the falling sickness, and the palsy.

I V Y.

THIS is too well known to require a description.

PLACE. It may be found upon most old stone walls of churches, houses, and ruinous buildings, and frequently in woods and upon trees.

TIME. It flowereth in July, but the berries do not ripen till they have felt the winter frosts.

GOVERNMENT AND VIRTUES. It is under the dominion of Saturn. Dioscorides recommends about a drachm of the flowers to be taken twice a day in red wine as an excellent medicine for the lask and bloody flux. It is very pernicious to the nerves and sinews being taken too liberally, but particularly helpful when externally applied. Pliny observes, that the yellow berries are good against the jaundice, and help those who spit blood; also prevent drunkenness; and that the white berries, being either inwardly or outwardly applied, kill the worms in the belly. The same beaten to powder, and taken in liquor for two or three days together, admirably help those who have the plague, or, taken in wine, break the stone, provoke urine, and bring down the menstrua. The fresh leaves of ivy, boiled in vinegar, and applied warm to the sides of those that are troubled with the spleen, ach, or stitch in the sides, give immediate ease; or, used with rose-water and oil of roses to bathe the temples and forehead, ease the head-ach, though of long continuance. The same, boiled in wine, cleanse and heal old and filthy ulcers, by using it as a wash; it is likewise an excellent cure for green wounds, burnings, scaldings, and all kinds of exulcerations coming thereby, or by salt phlegm or humours in other parts of the body. The juice of the berries or leaves, snuffed up the nose, purgeth the head and brain of thin rheum which causeth defluxions into the eyes and nose, and cureth the ulcers and stench therein; the same, dropped into the ears, helpeth the old and running sores of them. By the continual drinking out of a cup made of ivy, all symptoms of the spleen are entirely erased. The speediest cure for a surfeit by wine, is to drink a draught of the same liquor wherein a handful of bruised ivy-leaves have been boiled.

J U N I P E R - B U S H.

THIS is equally as well known as the former, consequently a description would be equally needless.

PLACE.

PLACE. They are very plentiful in most woods and commons, particularly upon Warley-common, near Brentwood in Essex; upon Finchley common, without Highgate; adjacent to the Newfound Wells near Dulwich; upon a common between Mitcham and Croydon; in the highway near Amersham in Buckinghamshire; and in many other places.

TIME. The berries are not ripe the first year, but continue green two summers and one winter before they ripen, when they change their colour to black; they are ripe about the fall of the leaf.

GOVERNMENT AND VIRTUES. This admirable solar shrub can scarcely be equalled for its virtues. Its berries are hot in the third degree, and dry in the first, being an excellent counter-poison and a great resister of pestilence; they are very good for the bitings of venomous beasts; they provoke urine exceedingly, and therefore are very available in disuries and stranguaries. It is so powerful a remedy for the dropsy, that, by drinking only the lye made of the ashes of this herb, it cures the disease; it provokes the terms, helps the fits of the mother, strengthens the stomach, and expels wind; indeed there are few better remedies for the wind and chollic than the chymical oil drawn from the berries; but, as many, in all probability, would be at a loss how to extract this oil, I would advise them to eat ten or a dozen of the ripe berries every morning fasting, as these will occasionally answer the afore-said purposes; they are also good for a cough, shortness of breath, consumption, pains in the belly, ruptures, cramps, and convulsions; they strengthen the brain, help the memory, fortify the sight by strengthening the optic nerves, and give safe and speedy delivery to women in labour; they are excellent good in all sorts of agues, they help the gout and sciatica, and strengthen all the limbs of the body. The ashes of the wood are a special remedy for the scurvy in the gums, by rubbing them therewith; the berries stay all fluxes, help the hemorrhoids or piles, and kill worms in children; they break the stone, procure lost appetite, and are very good for palsies and falling sickness. A lye made of the ashes of the wood, and the body bathed therewith, cures the itch, scabs, and leprosy.

J U J U B E - T R E E.

NAMES AND KINDS. DODONEUS says, there are two sorts of jujubes, red and white; and of the red three different kinds, viz. the greater jujube-tree, called in Latin *ziziphus sive jujuba major*; the lesser jujube, called *ziziphus sive jujuba minor*; and the wild jujube-tree.

DESCRIPTION. The greater jujube-tree grows sometimes very high, but oftener spreads itself in breadth, having a crooked body; the wood is hard and whitish,
the

the bark rugged, and the branches great and spreading; the smaller twigs about a foot long are full of leaves on both sides, one a little above another, and an odd one at the end; these leaves are small, broad, and pointed at the end; finely dented about the edges, with long veins in them, each standing on a long footstalk, smooth, and feel hard. At the foot of every leaf, towards the tops of the twigs, come forth small yellowish flowers, each consisting of five leaves; these are succeeded by the fruit, which is somewhat like a small plumb, or olive, but rather long, green and harsh at the first; afterwards they become yellowish, and when ripe they are of a fine red colour, of a sharp sweetness, and somewhat clammy; flattish next the stalk, containing a stone not unlike that of the olive or Cornelian cherry; and its skin is thicker and harder than that of the plumb. The branches are thorny, standing two always at a joint, one whereof is crooked, the other straight; the roots are long and fast in the earth.

The smaller jujube-tree is in branches, leaves, flowers, and fruit, very much like the former, except that it is every way somewhat smaller; it is also thick set with thorns like the other, but these are rather shorter.

The wild jujube-tree is lower, and more like a shrub, than either of the former, but thicker set with small sharp thorns; the leaves are not unlike, but grow not so thick on a twig, and are smaller; the fruit of this is also red, somewhat less, drier of substance, and of a sharper taste, than the others.

PLACE. The first groweth naturally in Africa, Egypt, and most eastern countries, and was, as Pliny observes, conveyed from thence into Italy, where it now grows in great plenty. The other kinds are likewise found in Italy, and in some parts of France, the wild kind growing in the fields and hedges.

TIME. They flower in May, and their fruit is generally ripe in September.

GOVERNMENT AND VIRTUES. Venus claims dominion over these. Jujube-berries, when fresh, open the body, purge choler, and cleanse the blood, as Simon Sethi and Actuarius affirm, though Mathioli positively denies their purging faculty. They are of a temperate quality in heat and moisture; they cool the heat and sharpness of the blood, and therefore are good in hot agues, also to expectorate tough phlegm and other diseases of the chest and lungs, as coughs, shortness of breath, hot distillations, &c. and, being taken in syrups or electuaries, expel the roughness of the throat and breast. They are good to cleanse the reins and bladder, their viscous qualities making the passages slippery, and expelling the gravel and stone with infinitely less pain; and they stay vomiting when caused by sharp humours. They are hard of digestion, being either fresh or dry, and therefore are used in decoction, syrups, or electuaries. I shall here present my readers with a most valuable receipt

for the cure of all sharp humours, ulcers, or inflammations, in the kidneys, reins, and bladder; and for the stone, jaundice, falling sickness, and dropfy.---It is thus prepared: Take jujubes, the seed of parsley, fennel, annise, and carraways, of each one ounce; of the roots of parsley, burnet, faxifrage, and carraway, one ounce and a half; let the seed be bruised, and the roots washed and cut small, then infuse them all night in a bottle of white wine, and in the morning boil it in a close earthen vessel until a third part be consumed; strain it, and drink four ounces at a time, the first and last thing morning and evening, abstaining from all other drink for at least three hours.---This you will find effectual for the afore said disorders.

HONEY-WORT.

THERE are divers species of the honey-wort, namely, the great, small, and rough; as, the greater yellow and red; the greater yellow or purple; and the smaller yellow and white; the flowers of all or either of which the bees are remarkably fond of, and much delighted with.

DESCRIPTION. The greater honey-wort groweth up upon a thick green stalk, to a moderate height, having many great, deep-pointed, green leaves, placed one above another; towards the top of each stalk come umbles of flowers, thick set, and rising up spirall or crested; mostly of a bright yellow colour; though some are red, others purple, and some perfectly white.

PLACE. The honey-worts grow not wild in England, but are cherished up in gardens, and planted in the pleasure-grounds and nurseries of the curious.

TIME. They spring up in April, and flower from the latter end of May to August, but perish in the winter.

GOVERNMENT AND VIRTUES. Honey-worts are under Mercury. They are of a temperate quality, between cold and hot; but rather inclining to cold, and are somewhat astringent. They stop bleeding at the mouth and nose, immoderate fluxes of the belly, and women's courses. The juice of the herb, with a little saffron dissolved in it, is an excellent remedy for weak, watery, or bleary eyes; and is used to heal foul ulcers after they have been cleansed, particularly in tender parts of the body. Some people used it instead of bugloss and borage, in all cases where those herbs are recommended. The flowers are very sweet.

INDIAN LEAF.

NAMES. IT is called by the Indians *cadegi Indi*, that is *folium Indum*. It is also called *malabathrum*, and by the East-Indians *tamala patra*.

No. 15.

3 L

DESCRIP-

DESCRIPTION. They are broad leaves, composed of three ribs, and a little pointed at the ends; amongst these are other leaves which sometimes grow on their branches, two usually at a joint, tasting somewhat hot, like the bay-leaf, as does likewise the bark; among these leaves is sometimes found a small fruit, very much resembling an acorn in the cup; this is probably the fruit of the tree, and gathered with the leaves.

GOVERNMENT AND VIRTUES. It is a solar plant; the virtues of it are these: it provokes urine, it warms and strengthens the stomach exceedingly, and makes the breath sweet. It is good to put into cordial and stomachic compositions; it resisteth poison and venom, and the infusion thereof in warm wine helpeth inflammations and redness of the eyes.

KIDNEY - WORT.

CALLED also wall-pennyroyal, and wall-pennywort.

DESCRIPTION. It hath many thick, flat, and round, leaves, growing from the root, every one having a long footstalk fastened underneath about the middle of it, a little unevenly waved sometimes about the edges, of a pale green colour, and hollow on the upper side, like a faucer. From among these rise one or more tender, hollow, smooth, stalks, about half a foot high, bearing thereon two or three small leaves, not round like those below, but somewhat long and divided on the edges; the tops are sometimes divided into long branches, bearing a number of flowers, set round about a long spike, one above another; they are hollow and shaped like a small bell, and of a whitish green colour; these are followed by small heads containing very small brownish seed, which, falling on the ground, springeth up in great plenty before the winter, if it happens to fall on a moist soil. The root is round and smooth, greyish without and white within, having small fibres at the head of the root and bottom of the stalk.

PLACE. It grows in great abundance in many parts of this kingdom, particularly in the western, upon stone and mud walls, upon rocks and stony ground, at the foot and often on the trunks of rotten trees.

TIME. It usually flowereth in the beginning of May, and the seed, ripening quickly after, sheddeth itself. About the end of the same month the leaves and stalks begin to wither, and remain in that state till September, when the leaves spring up again, and abide green all the winter.

GOVERNMENT AND VIRTUES. Venus claimsthis herb under Libra. The juice or distilled water, being drunk, is very effectual for all inflammations and unnatural heats; also to cool a fainting stomach, a hot liver, or heat in the bowels. Thebruised

herb

herb or the distilled water thereof, applied to pimples, redness, St. Anthony's fire, or other inflammations proceeding from heat, quickly healeth the same; it likewise easeth the pains of the kidneys occasioned by the fretting of the stone, provokes urine, is available for the dropfy, helpeth to break the stone, cooleth inflamed parts, easeth the pains of the bowels, and stoppeth the bloody flux. It is a singular remedy for the painful piles, or hemorrhoidal veins, by bathing the affected parts with the juice thereof, or using it as an ointment; and is effectual in easing pains of the hot gout, the sciatica, and the inflammations and swellings of the scrotum; it cureth the kernels or knots in the neck or throat, called the king's evil; it healeth kibes and chilblains by washing them with the juice, or anointing them with an ointment made thereof, laying at the same time some of the skin of the leaf upon them. It is also used in green wounds, to stay the blood and heal them.

K N A P - W E E D.

DESCRIPTION. THE common sort of knap-weed hath many long and somewhat broad dark green leaves, rising from the root, deeply dented about the edges, and sometimes a little rent or torn on both sides in two or three places, and somewhat hairy; from among these groweth up a strong round stalk, four or five feet high, which is divided into many branches; at the tops of these stand large green scaly heads, bearing in the middle many dark purplish red thrums or threads: these are succeeded by black seed, wrapped in down, somewhat like those of the thistle, but smaller: The root is white, hard, and woody, with many fibres annexed thereto; it perisheth not, but liveth during the winter, shooting forth fresh leaves every spring.

PLACE. It grows frequently in fields and meadows, but chiefly in borders and hedges, and may be found on waste grounds.

TIME. It is generally in blossom about June and July, and the seed is ripe shortly after.

GOVERNMENT AND VIRTUES. Saturn claims dominion over this herb. It helpeth to stay fluxes, bleeding at the nose and mouth, or other outward parts, and closeth broken blood-vessels; it stayeth the distillations of thin and sharp humours from the head upon the stomach and lungs; it is good for those who are bruised by a fall, blow, or otherwise; it is very profitable for ruptures, by drinking the decoction of the herbage and root in wine, and applying the same outwardly to the place; it is exceeding good for all running sores, cankerous and fistulous, drying up the moisture, and healing them gradually; and is an admirable remedy for a sore throat, swelling of the uvula and jaw, and all green wounds.

KNOT-

KNOT - GRASS.

IT is so universally known, that a description would be quite unnecessary.

PLACE. It grows in almost every part of this kingdom, by the highway sides, by the footpaths in fields, and by the sides of old walls.

TIME. It grows up late in the spring, and remains green till the winter, when all the branches perish.

GOVERNMENT AND VIRTUES. Saturn appears to have dominion over this herb, though many are of opinion it is influenced by the Sun. The juice of the common kind of knot-grass is very effectual to stay bleeding at the mouth and nose, by drinking it in steed or red wine for the one, or applied to the forehead or squirted up the nostrils for the other. It is no less effectual to cool and temper the heat of the blood and stomach; also to stay fluxes of blood and humours, as the last, bloody flux, women's courses, and running of the reins. It is a singular provocative of urine, it helps the stranguary, and allayeth the heat proceeding therefrom; and, by taking a drachm of the powder of the herb in wine, for several days together, it powerfully expels the gravel or stone from the kidneys and bladder. Being boiled in wine and drunk, it healeth the wounds made by the bitings of venomous creatures, effectually stays all defluxions of rheumatic humours upon the stomach, kills the worms in the belly, and eases the inward pains that proceed from the heat, sharpness, and corruption, of blood, and choler. The distilled water of this herb taken by itself, or with the powder of the plant or seed, will equally answer all the aforesaid purposes, and is held in high estimation for its admirable efficacy in cooling all manner of inflammations, breakings-out, hot swellings and imposthumes, gangrenes, fistulous cankers, ulcers and sores in the privities of either sex, and all kinds of fresh and green wounds, and quickly healing them, being washed therewith. The juice, dropped into the ears, cleanseth such as are foul and have running matter therein, and is very good for broken joints and ruptures.

K A L I.

NAMES AND KINDS. IT is called also glass-wort and salt-wort there are four kinds of kali described by Parkinson, viz. 1. *Kali majus cochleatum*, great glass-wort with snail-like seed. 2. *Kali minus album*, small glass-wort. 3. *Kali Ægyptiacum*, glass-wort of Egypt. And 4. *Kali geniculatum*, five *salicornia*, jointed glass-wort. I shall only describe the last.

This jointed kali, or glass-wort, groweth up usually but with one upright, round, thick, and almost transparent, stalk, a foot high or more; thick set, and full of joints or knots, without any leaves at all, but shooting forth joints one out of another, with
short

short cods at the heads of them, and such-like smaller branches on each side, and they are divided into other smaller ones; it is thought to bear neither flower nor seed; the root is small, long, and thready. Some other kinds there are differing somewhat in the form of the joints, and one kind wholly reddish, and differing from the other in nothing else.

The first and third are absolute strangers in our countries, but grow in Syria, Egypt, Italy, and Spain; the second groweth, not only in those countries, but in colder climates, upon many places of our own coasts, especially of the west country. The last generally groweth in all countries, in many places of our sea-coast, where the salt-water overfloweth.

TIME. They all flourish in the summer, and those that perish give their seed in August, or later; the last abideth all the winter.

GOVERNMENT AND VIRTUES. Kali, or glass-wort, all the sorts thereof are under the dominion of Mars; they are all of a cleansing quality, without any great or manifest heat; the powder of any of them, or the juice, which is much better, taken in drink, purgeth downwards flegmatic, watery, and acrid, melancholy humours, and therefore is very effectual for the dropsy, to provoke urine, and expel the dead child. It opens stoppings of the liver and spleen, and wastes the hardness thereof; but it must be used with discretion, as a great quantity is dangerous, hurtful, and deadly.

The ashes are very sharp and biting like a caustic, and the lye that is made thereof is so strong, that it will fetch off the skin from the hands or any part of the body, but may be mixed with other more moderate medicines to take away scabs, leprosy, and to cleanse the skin: the powder of stones, and the ashes hereof, being melted, is the matter whereof glass is made, which, when it gloweth in the furnace, casteth up a fat matter on the top, and when it is cold is fat and brittle, and is called sandiver.

It worketh much to the same effect with the herb or ashes; it is used often in powder to blow into horses eyes, or, being dissolved, to be squirted in them, to take away any superfluous film or skin beginning to grow thereon: both of them likewise serve to dry up running sores, scabs, tetters, ringworms, and to help the itch.

LADIES' MANTLE.

DESCRIPTION. IT hath many leaves rising from the root, standing upon long hairy footstalks, being almost round, but a little cut in on the edges, into eight or ten parts, more or less, making it seem like a star, with so many corners and points, and dented round about, of a light green colour, somewhat hard in handling, as if it

were folded or plaited at first, and then crumpled in divers places; and a little hairy, as the stalk is also, which riseth up among them to the height of two or three feet, with such-like leaves thereon, but smaller, and, being weak, is not able to stand upright, but bendeth down to the ground, divided at the top into two or three small branches, with small and yellowish green heads, and flowers of a whitish colour breaking out of them, which being past, there cometh small yellow seed like poppy-feed; the root is somewhat long and black, with many strings or fibres.

PLACE. It groweth naturally in many pastures and wood-sides, in Hartfordshire, Wiltshire, and Kent, and other places of this land.

TIME. It flowereth in May and June, and remains green all the winter.

GOVERNMENT AND VIRTUES. Venus claims the herb as her own. Ladies' mantle is very proper for those wounds that have inflammation, and is very effectual to stay bleedings, vomiting, fluxes of all sorts in men or women, and bruises by falls or otherwise, and helpeth ruptures; it is also good for some disorders in womens breasts, causing them to grow less and hard, being both inwardly and outwardly applied. The distilled water, taken for twenty days together, helpeth conception; and a bath, made of the decoction of the herb, will sometimes prevent miscarriages. It is one of the most useful wound-herbs, and therefore highly prized and praised by the Germans, who, in all wounds, inward and outward, drink the decoction thereof, and wash the wounds therewith, or dip tents therein, and put them into the wounds. It quickly healeth green wounds, not suffering any corruption to remain behind; and it cureth old sores, though fistulous and hollow.

L A V E N D E R.

IT is so well known, being an inhabitant of almost every garden, that it needeth no description.

TIME. It flowereth about the end of June and the beginning of July.

GOVERNMENT AND VIRTUES. Mercury owns the herb, and it carries its effects very potently. Lavender is of special use for pains of the head and brain that proceed of a cold cause, as the apoplexy, falling sickness, the drowsy or sluggish malady, cramps, convulsions, palsies, and often faintings. It strengthens the stomach, and freeth the liver and spleen from obstructions, provoketh women's courses, and expelleth the dead child and after-birth. The flowers of lavender steeped in wine are efficacious in obstructions of urine, or for those troubled with the wind or cholic, if the places be bathed therewith. A decoction made with the flowers of lavender, hoarhound, fennel, and asparagus roots, and a little cinnamon, is used to help the falling sickness and giddiness of the brain: to gargle the mouth with the decoction

decoction thereof is good for the tooth-ach. Two spoonfuls of the distilled water of the flowers taken help them that have lost their voice; as also the tremblings and passions of the heart, and faintings and swoonings, not only being drunk, but applied to the temples or nostrils; but it is not safe to use it where the body is replete with blood and humours, because of the hot and subtil spirits wherewith it is possessed. The chymical oil drawn from lavender, usually called oil of spike, is of so fierce and piercing a spirit, that it is cautiously to be used, some few drops being sufficient to be given with other things, either inwardly or outwardly.

LAVENDER COTTON.

IT being a common garden herb, I shall forbear the description; only take notice that it flowereth in June and July.

GOVERNMENT AND VIRTUES. It is under the dominion of Mercury. It resisteth poison, putrefaction, and helps the bitings of venomous beasts: a drachm of the powder of the dried leaves, taken every morning fasting, in any convenient vehicle, stops the running of the reins in men, and whites in women: the seed being beaten into powder, and taken as wormseed, kills worms: the like doth the herb itself, being boiled in milk, and the milk drunk: scabs and itch are cured by bathing with a decoction of it.

LADIES' SMOCK, OR CUCKOO-FLOWER.

DESCRIPTION. THE root is composed of many small white threads, from tender dark-green leaves, set one against another upon a middle rib, the greatest being at the ends, amongst which rise up divers tender, weak, round, green, stalks, somewhat straked, with longer and smaller leaves upon them; on the tops of which stand flowers, almost like stock-gilliflowers, but rounder and not so long, of a blushing white colour: the seed is reddish, and groweth in small pouches, being of a sharp biting taste, and so is the herb.

PLACE. They grow in moist places and near to brook sides.

TIME. They flower in April or May, and the lower leaves continue green all the year.

GOVERNMENT AND VIRTUES. They are under the dominion of the moon, and very little inferior to water-creffes in all their operations: they are very good for the scurvy: they provoke urine and break the stone, and excellently warm a cold and weak stomach, restoring lost appetite and helping digestion.

LETTUCE.

L E T T U C E.

GOVERNMENT AND VIRTUES. THE moon owns it. The juice of lettuce mixed or boiled with oil of roses, and applied to the forehead and temples, procureth sleep and easeth the head-ach proceeding from a hot cause; being boiled and eaten, it helpeth to loosen the belly: it helpeth digestion, quencheth thirst, increases milk in nurses, easeth griping pains of the stomach or bowels that come of choler. It abateth bodily lust, being outwardly applied with a little camphire: applied in the same manner to the region of the heart, liver, or reins, or by bathing the said place with the juice or distilled water wherein some white fanders or red roses are put also, it not only represseth the heat and inflammation therein, but comforts and strengthens those parts, and also tempereth the heat of urine. Galen adviseth old men to use it with spices, and, where spices are wanting, to add mint, rocket, and such-like hot herbs, or else citron, lemon, or orange, seeds, to abate the cold of one and heat of the other. The seed and distilled water of the lettuce work the like effects in all things: but the use of lettuce is chiefly forbidden to those that are short-winded, or have any imperfection in their lungs, or spit blood.

W A T E R - L I L Y.

OF this there are two principal noted kinds, viz. the white and the yellow.

DESCRIPTION. The white lily hath very large and thick dark green leaves lying on the water, sustained by long and thick foot-stalks, that rise from a great, thick, round, and long, tuberous black root, spongy or loose, with many knobs thereon, like eyes, and whitish within, from the midst of which rise other the like thick and great stalks, sustaining one large white flower thereon, green on the outside, but as white as snow within, consisting of divers rows of long and somewhat thick and narrow leaves, smaller and thinner the more inward they be, encompassing a head within, with many yellow threads or thrums in the middle, where, after they are past, stand round poppy-like heads, full of broad, oily, and bitter, seed.

The yellow kind is little different from the former, only it hath fewer leaves on the flowers, greater and more shining seed, and a whitish root both within and without: the roots of both being somewhat sweet in taste.

PLACE. They are found growing in great pools and standing waters, and sometimes in slow running rivers, and ditches of running water, in sundry places of this land.

TIME. They flower most commonly about the end of May, and their seed is ripe in August.

GOVERN-

GOVERNMENT AND VIRTUES. The herb is under the dominion of the moon, and therefore cools and moistens like the former. The leaves and flowers of the water-lilies are cold and moist, but the root and seed are cold and dry; the leaves cool all inflammations, and both outward and inward heats of agues, and so do the flowers.

WHITE LILIES.

IT being unnecessary to describe a plant so common as to be met with in almost every flower garden, suffice it to detail their

GOVERNMENT AND VIRTUES. They are under the dominion of the moon, and, by antipathy to Mars, expel poison; they are exceedingly used in pestilential fevers, the roots being bruised and boiled in wine, and the decoction drunk, expelling the poison to the exterior parts of the body; the juice of it, being tempered with barley-meal baked, and eaten as ordinary bread, is an excellent cure for the dropsy. An ointment made of the root with hogs-lard is exceedingly good for scald heads, and unites the sinews when cut; it has also great virtue in cleansing ulcers, it being of a fine suppurating quality; the root, boiled in any convenient decoction, gives speedy delivery to women in travail, and expels the after-birth. The root, roasted and mixed with a little hogs-lard, makes an excellent poultice to ripen and break plague-sores. The ointment is also extremely good for swellings in the privities, and cures burns and scalds without leaving any scar; and is a preventative against baldness.

The decoction of the white or yellow lilies, made of the seeds, roots, or leaves, is singularly efficacious in restraining nocturnal pollution, occasioned by dreams.

LILY OF THE VALLEY.

CALLED also convul lily, May lily, and lily confancy.

DESCRIPTION. The root is small, and creepeth far in the ground, as grass roots do; the leaves are many; amongst which rises up a stalk half a foot high, with many white flowers like little bells, with turned edges, of a strong though pleasing smell; the berries are red, and not much unlike those of asparagus.

PLACE. They grow plentifully upon Hampstead-heath, and in various other places in the kingdom.

TIME. They flower in May, and the seed is ripe in September.

TEMPERATURE AND VIRTUES. It is under the dominion of Mercury, and therefore, without doubt, strengthens the brain, renovates a weak memory, and makes it strong again. The distilled water, dropped into the eyes, helps inflammations

thereof, as also that infirmity which they call pin and web: the spirit of the flowers, distilled in wine, restoreth lost speech, helps the palsy, and is exceeding good in the apoplexy, comforteth the heart and vital spirits. Gerrard saith, that, the flowers being close stopped up in an ant-hill, and taken away again a month after, a liquor will be found in the glass, which, being externally applied, tends to relieve the gout.

LIQUORICE.

DESCRIPTION. THE English liquorice shoots up with several woody stalks, whereon are set, at several distances, many narrow, long, green leaves, set together on both sides of the stalks, and an odd one at the end, nearly resembling a young ash-tree sprung up from the seed. This, by many years continuance in a place without removal, but not else, will bring forth numerous flowers, standing together spike-fashion, one above another upon the stalks, in the form of pea-blossoms, but of a very pale blue colour, which turn into long, somewhat flat, and smooth, pods, wherein is contained small, round, hard, seed. The root runneth down exceeding deep into the ground, with divers other smaller roots and flowers growing with them; they shoot out suckers in every direction, by which means the product is greatly increased. The root is of a brownish colour on the outside, and yellow within.

PLACE. It is planted in fields and gardens in divers places of this kingdom, greatly to the profit of the cultivators.

GOVERNMENT AND VIRTUES. It is under the dominion of Mercury. Liquorice boiled in clear water, with some maiden-hair and figs, maketh a good drink for such as are troubled with a dry cough, hoarseness, wheezing, or shortness of breath, and for all complaints of the breast and lungs, phthisic, or consumptions, caused by the distillation of salt humours on them. It is also good in all pains of the reins, the stranguary, and heat of urine. The fine powder of liquorice blown through a quill into the eyes of those afflicted with the pin and web, as it is called, or rheumatic distillations into them, cleanses and greatly relieves them. The juice of liquorice is as effectual in all the diseases of the breast and lungs, the reins and bladder, as the decoction. The juice dissolved in rose-water, with some gum tragacanth, is a fine medicine for hoarseness, wheezings, &c.

LIVER - WORT.

DESCRIPTION. THE common liver-wort groweth close, and spreadeth much upon the ground, in moist and shadowy places, with numerous sad-green leaves,

or

or rather, as it were, sticking flat one to another, very unevenly cut in on the edges, and crumpled, from among which arise small slender stalks, an inch or two high at most, bearing small flowers at the tops, somewhat resembling stars.

GOVERNMENT AND VIRTUES. It is under the command of Jupiter, and under the sign Cancer. It is a singular good herb for all the diseases of the liver, both to cool and cleanse it, and helpeth inflammations in any part; it is likewise serviceable in the yellow jaundice; being bruised and boiled in small beer, and drunk, it cooleth the heat of the liver and kidneys, and helpeth the running of the reins in men, and the whites in women; it is a singular remedy to stay the spreading of tetters, ring-worms, and other fretting and running sores and scabs, and is an excellent remedy for such whose livers are corrupted by surfeits, which causeth their bodies to break out, for it fortifies the liver exceedingly, and makes it impregnable.

LOOSE-STRIFE, OR WILLOW-HERB.

DESCRIPTION. THE common yellow loose-strife groweth to the height of four or five feet, with great round stalks a little crested, diversly branched, from the middle of them to the tops, into great and long branches, on all of which, at the joints, there grow long and narrow leaves, but broader below, and usually two at a joint, yet sometimes three or four, somewhat like willow-leaves, smooth on the edges, and of a faint green colour; from the upper joints of the branches, and at the tops of them also, stand many yellow flowers of five leaves a piece, with divers yellow threads in the middle, which turn into small round heads, containing small cornered seeds. The root creepeth under ground, almost like couch-grass, but greater, and shooteth up every spring, with brownish heads, which afterwards grow up into two stalks; it hath no scent nor taste, but only astringent.

PLACE. It groweth in most parts of the kingdom, in moist meadows, and by the sides of water.

TIME. It flowereth from June to August.

GOVERNMENT AND VIRTUES. This herb is good for all manner of bleeding at the mouth or nose, or wounds; all fluxes of the belly, as well as the bloody flux, given either to drink, or administered as a clyster; it stayeth also the abundance of women's courses. It is a singular good herb for green wounds, to stay the bleeding, and quickly closes together the lips of the wound, if the herb be bruised, and the juice only applied. It is often used in gargles for sore mouths, as also for the secret parts. The smoke hereof, on its being burnt, driveth away flies and gnats, which are used in the night-time to infest the habitations of people dwelling near marshes, and in the fenny countries.

LOOSE-

LOOSE-STRIFE, with spiked Heads of Flowers.

DESCRIPTION. THIS groweth with many woody square stalks, full of joints, about three feet high at least, at every one whereof are two long leaves, shorter, narrower, and of a darker green colour, than the former, and somewhat brownish. The stalks are branched into many long stems of spiked flowers, half a foot long, growing in bundles one above another, out of small husks very like the spiked heads of lavender, each of which flowers has five round pointed leaves of a purple violet colour, or somewhat inclining to redness, in which husks stand small round heads after the flowers are fallen, wherein is contained small seed; the root creepeth under ground like unto the yellow, but is greater than it; and so are the heads of the leaves when they first appear out of the ground, and more brown than the other.

PLACE. It groweth usually by rivers, and ditches sides in wet grounds, as about the ditches at and near Lambeth, and in many other parts of the kingdom.

TIME. It flowereth in the months of June and July.

GOVERNMENT AND VIRTUES. The herb is an herb of the moon, and under the sign Cancer; it is an excellent preservative of the sight when well; nor is there a better cure for sore eyes than eye-bright taken inwardly, and this used outwardly; it is cold in quality. This herb is not a whit inferior to the former, it having not only all the virtues which the former hath, but some peculiar virtues of its own found out by experience; namely, the distilled water is a present remedy for hurts and blows on the eyes, and for blindness, if the chrystalline humour be not perished or hurt; and this hath been sufficiently proved true by the experience of a person of judgment, who kept it long to himself as a great secret; it also cleareth the eyes of dust or any other thing which may have got into them, and preserveth the sight; it is also a good remedy for wounds and thrusts, being made into an ointment in the following manner: To every ounce of the water add two drachms of May-butter without salt, and of sugar and bees-wax the same quantity of each, which must boil gently all together; when thus brought to a proper consistence, let tents be dipped in the ointment after it is cold, and put into the wounds, and the place covered with a linen cloth doubled, on which the ointment may be thinly spread; this is an approved medicine. It likewise cleanseth and healeth all foul ulcers and sores whatsoever, by washing them with the water, and laying on them a green leaf or two in the summer, or dry leaves in the winter. This water, when warmed, and used as a gargle, or even drunk sometimes, cures the quinsy, or king's evil in the throat. The said water, applied warm, taketh away all spots, marks, and scabs, in the skin; and a little of it drunk queneth extraordinary thirst.

LOVAGE.

L O V A G E.

DESCRIPTION. IT hath many long and great stalks, with large winged leaves, divided into many parts like smallage, but much larger and greater, every leaf being cut about the edges, broadest forwards, and smallest at the stalk, of a sad green colour, smooth and shining: from among which rise up sundry strong hollow green stalks, five or six feet, and sometimes seven or eight feet, high, full of joints, but smaller leaves set on them than grow below; and with them, toward the tops, come forth long branches, bearing at their tops large umbles of yellow flowers, and after them flat brownish seed. The root groweth thick, great, and deep, spreading much, and enduring long, of a brownish colour on the outside, and whitish within. The whole plant, and every individual part of it, smelleth strong and aromatically, and is of an hot, sharp, biting, taste.

PLACE. It is usually planted in gardens, where, if it be suffered, it groweth huge and great.

TIME. It flowereth in the end of July, and seedeth in August.

GOVERNMENT AND VIRTUES. It is an herb of the sun, under the sign Taurus: If Saturn offend the throat, (as he always doth if he be the occasion of the malady, and in Taurus in the genesis,) this is your cure. It openeth, cutteth, and digesteth, humours, and mightily provoketh women's courses and urine; half a drachm at a time of the dried root in powder, taken in wine, doth wonderfully warm a cold stomach, helping digestion, and consuming all raw and superfluous moisture therein; easeth all inward gripings and pains, dissolveth wind, and resisteth poison and infection. To drink the decoction of this herb is a well-known and much-practised remedy for any sort of ague, and greatly helps the pains and torments of the body and bowels occasioned by cold. The seed is effectual to all the purposes aforesaid, except the last, and worketh more powerfully. The distilled water from the herb helpeth the quinsy in the throat, if the mouth and throat be gargled and washed therewith; and relieveth the pleurisy being drunk three or four times. When dropped into the eyes, it taketh away the redness or dimness of them; it also taketh away spots or freckles in the face. The leaves bruised, and fried with a little hogslard, applied hot to any blotch or boil, will quickly break it.

L O V E - A P P L E.

IT is also called golden apple, apple of love, and in Latin *poma amoris*.

No. 16.

3 O

DESCRIP-

DESCRIPTION. It groweth into a tree of a reasonable height, with large dented leaves, cut in upon the edges, and of a pale green colour. The blossoms are large and white, which falling, the fruit follows.

PLACE. The tree is a native of Ethiopia; but it is planted in the gardens or nurseries of many of the curious in this kingdom.

TIME. They blossom in April and May, and the fruit is ripe in August and September.

GOVERNMENT AND VIRTUES. The apples of love are under Venus; yet are they cold and moist in an extreme degree. They are olygotrophic and cachochymic; yet, in hot countries, they are eaten as sauce, boiled with pepper, salt, and oil. The juice, boiled with uxungia to a salve, heals all inflammations and burnings; and the leaves boiled with oil-olive, till crisped, then strained, and afterwards boiled with wax, rosin, and a little turpentine, to a salve, are an infallible remedy for old sores and ulcers of the privities, or for wounds and ulcers in other parts of the body, coming of heat, or viscous humours of the blood.

LUNG - WORT.

DESCRIPTION. THIS is a kind of moss that groweth on sundry sorts of trees, especially oak and beech; with broad, greyish, tough, leaves, diversely folded, crumpled, and gashed in on the edges, and sometimes spotted also with many small spots on the upper side: it was never seen to bear any stalk, or flower at any time.

GOVERNMENT AND VIRTUES. Jupiter seems to own this herb, which is greatly used by physicians to help the diseases of the lungs, and for coughs, wheezings, and shortness of breath, which it cureth both in man and beast; it is very successfully used in lotions that are taken to stay the moist humours that flow to ulcers, which hinder their healing; as also to wash all other ulcers in the privy parts of man or woman.

It is an excellent remedy, boiled in beer, for broken-winded horses.

LARCH - TREE, AND ITS AGARIC.

DESCRIPTION AND NAMES. IT grows about Italy, and also in Asia. It is called *larix* both in Greek and Latin; and also *agaricum*, and *agaricus*; the agaric is an excrescence, or kind of mushroom, that groweth on this tree, being within white, soft, and spongy, like a mushroom. The agaric is hot in the first degree, and dry in the second; it hath an attenuating cleansing quality, and purges obstructions of the entrails by stool; it purgeth phlegm, choler, and melancholy, and cleanseth the

the breast, lungs, liver, and reins; provokes urine and the terms; kills worms, helps pains of the joints, and causeth a good colour.

It is not good to be taken alone, without corrigents; therefore the syrup of roses, solutive with agaric, is good to be taken; it cures the yellow jaundice, and is exceeding good for agues coming of thick humours, for which they take pills of hiera with agaric; it may be given with oxymel for agues of all sorts, and gripings of the belly; it is good against shortness of breath, the phthific, and consumption; half a drachm thereof in wine is an excellent antidote against poisons.

LENTILES.

KINDS AND NAMES. THEY are called *lens*, and *lenticula*, in Latin. In some counties of England, where they sow them for meat for their cattle, they call them tills.

There are three sorts, 1. *Lens major*, the greater lentil. 2. *Lens minor*, the smaller lentil. And, 3. *Lens maculata*, the spotted lentil.

DESCRIPTION. 1. The greater lentil groweth about two feet long, with many hard, yet slender and weak, branches, from whence, at several places, shoot forth long stalks of small winged leaves, many on each side of a middle rib, which middle rib endeth in a small clasper; between the leaves and the stalks come the flowers, which are small, of a sad reddish colour, inclined to purple, almost like the flowers of vetches; they stand, for the most part, two at the end of a long foot-stalk; after they flowers are gone, there succeed small, short, flat, pods, wherein is flat round, smooth, seed, of a pale yellowish ash-colour; the root is fibrous, and dieth every winter.

2. The smaller lentil differeth from the former only in this, that the stalks, leaves, and seed, are less; the flowers more pale, and the seeds whiter.

The third differs not much from the last; but the seed is spotted with black.

GOVERNMENT AND VIRTUES. They are under the dominion of Saturn; of a mean temperature between heat and cold, and dry in the second degree. According to Galen, they are somewhat astringent, and bind the body, especially the outward skin. It is of contrary qualities, for the decoction thereof doth not bind but loosen the body; therefore, those who would have it bind must throw away the first water and use the second, which stops the last, and strengtheneth the stomach and inward parts.

LEMON-TREE, OR LEMONS.

NAMES. There are several sorts of lemons: some great, others small; some having very thick and rugged peels, and some very smooth; some are of a wild juice, others sharp, and some very tart and crabbed; which alterations may be made both by the soil and place where they grow or are planted.

1. The ordinary lemon-tree is called *malus limonia acida vulgaris*.
2. *Malus limonia acida, cortice tenui*; the thin-rind'd four lemon.
3. *Malus limonia acida, fructu rotunda*; the four round lemon.
4. *Malus limonia dulcis major*; the greater sweet lemon.
5. *Malus limonia dulcis minor*; the smaller sweet lemon, or civil lemon.
6. *Malus limonia silvestris minima*; the least wild lemon-tree.

DESCRIPTION. 1. The ordinary lemon-tree groweth great and high, with great arms and slender branches, with long greenish thorns; the leaves are long like unto bay-leaves, both dented about the edges, and full of holes: the flowers are white and sweet; the fruit long and round, of a pale yellow colour; and the rind rugged and uneven.

2. All the difference between this and the former is this, that the other is bigger, The rind of this second is of a fine pale yellow colour, smoother than the first-mentioned, and thinner; is full of a pleasant sharp juice, with seeds amongst it, as the other also hath.

3. The tree that beareth the round lemons is in all things like the last; only in this, that it hath few or no thorns upon it; and the fruit is like it, having a thin rind, but is somewhat rounder, with a small crown at the head.

4. The greater sweet lemon is greater than any of the former described lemons; the rind is more smooth and yellow; and the juice more sweet and pleasant.

5. The lemon is of the same size as the thin-rind'd four lemon, and so like, that it is hard, by the outside, to know one from the other; but this hath a little deeper coloured rind, and the juice of a sweet pleasant taste, with a little sharpness.

6. The least wild lemon groweth wild in Syria and Egypt, and beareth very small fruit, no bigger than a pigeon's egg.

PLACE. These lemons are brought unto us from Spain and several of their islands.

TIME. They are evergreens, and never without blossoms, green and ripe fruit, throughout the year.

GOVERNMENT AND VIRTUES. The lemons are solar, yet of different parts, and contrary effects; they are of good use to resist poison, venom, or infection; an

ounce and an half of the juice of unripe lemons, drunk in wine, cleanseth the kidneys of the stone and gravel; and killeth worms in the body, and expelleth them.

An antidote against the plague, or any malignant or contagious disease, is thus prepared. Take four ounces of the pure juice of lemons, steep therein an angel of gold, or the weight thereof in leaf-gold, the space of twenty-four hours; then take out the gold, or draw the juice clear from it, and give some of it in a draught of wine, with a little of the powder of angelica root, unto any infected with the plague, and, if there be any hopes of recovery, it will help them. The juice of sweet lemons is neither so cooling nor operative as the other. The distilled water, drawn from the inner pulp or white substance of the lemons, cleareth the skin and face from freckles and spots, provokes urine, and expels the stone, by being drunk; helpeth the running scab, kills lice in the head, worms in the hands or nose, and wheals or pushes in the skin. The juice of lemons is good for seamen, and others at sea, to put into their beverage, to prevent the scurvy, to which people are much subjected in long voyages; it is likewise very properly used to quench thirst in warm climates.

An excellent remedy for scab and itch: Take a lemon, and cut it through the middle, after putting thereon some powder of brimstone, roast it, either against the fire, or under some embers, as you would do a warden-pear, and therewith rub the parts troubled with itch or scabs.

It is also the best, most sovereign, and clear, remedy to destroy those *pediculi inguinales* vulgarly called crab-lice, the parts afflicted with them being rubbed therewith.

LINE OR LINDEN TREE.

KINDS AND NAMES. OF the line-tree there are accounted two sorts, the male and the female; and of the female also two sorts, the greater and the smaller. It is called in Latin, *tilia*.

DESCRIPTION. 1. *Tilia mas*, the male line, groweth to be a great tree, with large spreading boughs, but not so much as the female, nor so flexible, but harder and more brittle, and of a thicker bark; the leaves are like unto elder-leaves, but smaller and longer; and on every one, for the most part, grow small bladders full of worms that turn into flies, which, when matured, fly away.

This tree seldom beareth either flower or fruit; yet, when it doth bear, it is round flat husks; many growing close together, each hanging on a long foot-stalk by itself, with a notch or cleft at the head or end thereof. The wood hereof is more knotty and yellower than that of the female.

2. *Tilia femina major*. The greater female line-tree groweth to be a larger tree than the former (especially if it happen to be planted in good ground); is covered with a dark-coloured bark, the next thereunto being very pliable to bend, having some other thin rinds within that; the leaves are fair and broad, greener, smoother, gentler, and rounder, than elm-leaves, and with a longer end; dented about the edges, and of a tolerable good scent; at the end of the branches oftentimes, and at the foot of the leaves, shoot forth long and narrow whitish leaves, along the middle rib whereof springeth out a slender long stalk, with divers white flowers thereon, smelling very sweet; after which follow small berries, wherein is contained black round seed; the wood is whitish, smooth, and light.

3. *Tilia femina minor*. The smaller linden-tree is like the last in all things, except that it groweth smaller in body, leaves, and flowers; the leaves are of a darker green colour, and it beareth no fruit after the flowers.

PLACE AND TIME. The greater female kind is planted in many places in this kingdom, in pleasant walks, it making a large sweet shadow, and usually flowereth in May. The others are seldom to be met with any where in this island.

GOVERNMENT AND VIRTUES. There is no medicinal use made of the male linden. The female is under the dominion of Venus, of a moderate temperature, and somewhat drying and astringent; the decoction of the leaves, got by boiling them in water, is a good lotion to wash the mouths of young children, or any sore mouths that have ulcers, blisters, or cankers, in them. The leaves being pounded or bruised, after boiling, and applied to the legs or feet, when swelled with the falling down of humours, doth help them; the bark is also effectual for the same purpose.

The flowers of the line-tree and of lilly convally distilled together are good against the falling sickness; so likewise is the distilled waters of the bark; and is also serviceable against those fretting humours which occasion the bloody flux, and griping in the guts. The water, wherein the inner bark hath been steeped till it becomes thick and mucilaginous, and applied with cloths wet therein, helps burnings and scaldings.

LUNG - FLOWER.

THERE are several sorts of these plants; and they are generally called autumn gentians.

DESCRIPTION. The great autumn gentian riseth up, according to the richness of the ground, higher or lower; sometimes two feet high, at others not above one foot; sometimes many, and others fewer, stalks; of a brownish green colour, with

with many long and narrow dark-green leaves, set by couples upon them, up to the tops, which seldom branch forth, but bear every one a large hollow flower, in most of them of a deep bluish purple colour, but in some a little paler, ending in five points. The roots are numerous, small, and long, growing deep into the ground, and abiding all the winter.

2. *Gentianella autumnalis fimbriata flore*; autumn gentian of Naples. This creeps up like couch-grass, from a long, yellowish, small, root, shooting forth a few long and narrow leaves, like those of flax, but shorter; but those that grow up to the middle of the stalk are larger, and smaller again from the middle to the top, two set at every joint all along, and striped from every one of the joints, on both sides, to the top of the stalk, which is green, and about a foot high; at the top cometh a purplish green husk, which hath four large pointed leaves that enclose the flower, which is long and writhed before it blows, and of a pale blue colour; but, when it is blown open, is of a deeper blue colour, having four leaves somewhat long, and as it were purpled about the edges, with a little hairiness; there is also a small leaf at the bottom of each flower, with a few yellow threads in the middle, standing about a head, which groweth to be the seed-vessel, forked into two parts at the head, being greater there than below, and containeth in it very small black seed when it is ripe.

3. Autumn gentian, with small centaury leaves, called in Latin *Gentianella autumnalis, centaureæ minoris folio*. This riseth up with sundry stalks scarce a foot high, parted into many small branches, whereon do stand two leaves together, very like those of the smaller centaury, not so long as either of the former, but a little broader and of a lighter green colour; at the tops of the stalks and branches grow divers blue flowers, set in small long husks half-way rising above the tops of them; the seed is small, and groweth in long horned vessels; the root is small and fibrous.

4. There is another sort with small centaury-like flowers, which is more spreading; is small, but hath larger leaves and flowers than centaury; of the same colour as are the flowers of centaury, yet having many more, and lasteth longer. The root, however, perisheth in winter.

5. Another smaller gentian, with centaury leaves, is very like the last, but smaller, and the stalks much lower, not being above three inches high, having many small branches, whereon are large blue flowers; the seed and vessels, when they are ripe, are like unto the last; the root is also small; but hath many more fibres than the others.

PLACE. The first is found growing in many parts of Germany, and many other foreign countries; in divers places of this kingdom, viz. at Gravesend; near
Green-

Greenhithe; in a chalk-pit not far from Dartford; and at Cobham; all in Kent: it groweth both in wet and dry grounds. The second, upon the hills in Naples, as related by Columna. The third, in divers places in Kent, as about Southfleet, and Longfield; also in Bedfordshire; and near Old Verulam in Hertfordshire. The rest are strangers here.

TIME. These flower not until August, and thence have the name of autumn gentian.

GOVERNMENT AND VIRTUES. These lung-flowers, or autumn gentian, are also under the dominion of Mars, as the gentian or fell-wort is; and much of the same temperature in respect to heat and driness; and may be used both inwardly and outwardly as effectually as gentian; and, where these are in plenty, and the other not easy to be had, will be found an efficacious substitute.

They are powerful against putrefaction, venom, and poison; the Germans account it their treacle, and formerly did make treacle with it, the *aristolochia*, bay-leaves, and other ingredients, at Jena, from whence it took the name of Jene-treacle, under which title it was imported into this kingdom; and is an excellent specific for all complaints in the stomach; a preventative against infection from the plague and all other infectious diseases, and expels the malignity thereof; preserves the heart, and strengthens it against faintings and swoonings; which treacle was of a bitter taste: but that which is now commonly used by the vulgar people, and generally, by them, called treacle, is very falsely denominated, being nothing else than the gross dregs of sugar, left after boiling and refining thereof, and is properly called molasses; which, though no wise helpful in any disease, is yet usually and greedily desired and taken by the common people as an universal medicine.

The roots of these gentians, being made into fine powder, and taken in wine, either by themselves, or with other things, as myrrh, rue, pepper, or the like, is an effectual remedy against the bitings or stings of serpents, or any other venomous creature, and against the bite of a mad dog, being taken three or four days together, and the wound carefully kept open with vinegar and salt water, and regularly cleansed and dressed.

The same roots also, being so taken in wine, open obstructions of the liver, and help such as are liver-grown. It easeth pains in the stomach, and helpeth such as cannot keep or relish their meat, or have lost their appetite. It refresheth such as are fatigued with travelling; being steeped in wine and drunk, it helps such as are lame in their joints owing to cold or bad lodging; and is effectual for pains, stitches, and prickings, in the sides; and is also good for those who are bruised by falls, it

possessing the virtue of dissolving congealed blood, and easing the pain occasioned thereby. The root is likewise held to be good against agues, when taken in any other liquor but wine; the distilled water of the herb is equally useful.

L U P I N E S.

KINDS AND NAMES. There are several kinds of lupines, as, the great white lupine, called *lupinus sativus albus*. The spotted white lupine, called *lupinus albus*; and the smallest blue lupine, called *lupinus minimus cæruleus*.

DESCRIPTION. 1. The great white lupine riseth up with a strong, upright, round, woolly, stalk, set confusedly with divers soft woolly leaves upon long foot-stalks, each being divided into several parts, narrow, long, and soft, greenish on the upper side, and woolly underneath; the main stalk is divided into two parts, after the flowers are grown from the uppermost joint, and are like unto the great garden bean, but wholly white without any spot; after the flowers come long, soft, woolly stalks, containing in them flat white leaves, somewhat yellowish within, of a very bitter taste. The root is long, hard, and fibrous, and perisheth every winter.

2. The spotted white lupine differeth from the former in the greatness and in the flower, which is spotted with blue on the head of the innermost leaves, and the hollow of the uppermost.

3. The smallest blue lupine is very like the other blue lupine; but smaller, both stalks and leaves; the flowers are blue, and the seed a little spotted.

PLACE. They grow naturally wild, but in England only are planted in gardens.

TIME. The lupines flower in July and August, and the seed is ripe soon after.

GOVERNMENT AND VIRTUES. Lupines are under the dominion of Mars: and have an opening, cleansing, dissolving, and digestive, property; but, if they be steeped in water until they have lost their bitterness, they may be eaten; however they are very hard to digest, breed gross humours, and pass slowly through the belly, yet do not stop any flux; if they be so steeped, and afterwards dried and taken with vinegar, they provoke appetite, and help the loathing of the stomach to meat. The decoction of lupines, taken with honey, opens obstructions of the liver and spleen, provokes urine and the terms, and expelleth the dead child, when taken with myrrh. It also cleareth the body of scabs, morpew, cankers, tetters, and running ulcers or sores; also cleanseth the face; taketh away the marks or pits which the small-pox leaves behind it; and cleareth the skin of marks, and black and blue spots.

An ointment of lupines, to beautify and make the face smooth, is made in the following manner: Take the meal of lupines, the gall of a goat or sheep, juice of lemons, and a little *alumen saccharinum*, and mingle them into the form of a soft ointment.

The meal of lupines, boiled in vinegar and applied to the parts, taketh away knobs, kernels, or pimples. The shells being burnt, the smoke thereof drives away gnats and flies.

M A D D E R.

DESCRIPTION. Garden-madder shooteth forth many very long, weak, four-square, reddish stalks, trailing on the ground a great way, very rough and hairy, and full of joints, at every one of which come forth divers long and somewhat narrow leaves, standing like a star about the stalks; rough also and hairy, toward the tops whereof come forth many small pale yellow flowers; after which come small round heads, green at first, and reddish afterwards, but black when they are ripe, wherein is contained the seed. The root is not very great, though about a yard long, spreading divers ways, and is of a clear red colour while it is fresh.

PLACE. It is cultivated in gardens or large fields, on account of the profits.

TIME. It flowereth toward the end of summer, and the seed is ripe quickly after.

GOVERNMENT AND VIRTUES. It is an herb of Mars; hath an opening quality, but afterwards binds and strengthens; is an assured remedy for the yellow jaundice by opening the obstructions of the liver and gall, and cleansing those parts; it openeth also the obstructions of the spleen, and diminisheth the melancholic humour. It is available for the palsy and sciatica; is effectual for inward and outward bruises, and is therefore much used in vulnerary drinks. The root, for all those aforesaid purposes, is to be boiled in wine or water, as the case requireth, and some honey or sugar put thereunto afterwards. The seed hereof, taken with vinegar and honey, helpeth the swelling and hardness of the spleen. The decoction of the leaves and branches is a good fomentation for women to sit over that have not their courses. The leaves and roots, beaten and applied to any part that is discoloured with freckles, morphew, the white scurf, or any such deformity of the skin, cleanse and thoroughly take them away.

The root of this madder, holden in the hand, while fresh, will, when a person makes water, change it to the colour of blood.

MAIDEN-

MAIDEN-HAIR.

DESCRIPTION. THE common maiden-hair doth, from a number of black hard fibres, send forth a great many blackish shining brittle stalks, hardly a span long ; in many not half so long ; on each side set very thick with small round dark-green leaves, spotted on the back of them like other ferns.

PLACE. It groweth much upon old stone walls in the western parts of England ; in Wales, in Kent, and divers other places. It is to be found, in great abundance, by the sides of springs, wells, and on the rocky, moist, and shadowy, places ; and is always green.

WALL-RUE, OR ORDINARY WHITE MAIDEN-HAIR.

DESCRIPTION. THIS hath very fine pale-green stalks almost as fine as hairs, set confusedly with divers pale-green leaves on very short footstalks, somewhat similar to the colour of garden rue, and not much differing in form, but more diversely cut in on the edges, and thicker ; smooth on the upper part, and spotted finely underneath.

PLACE. It groweth in many parts of the kingdom ; at Dartford, and the Bridge at Ashford, both in Kent ; at Beaconsfield, in Buckinghamshire ; on Framlingham castle, in Suffolk ; on the church-walls at Mayfield, in Suffex ; in Somersetshire ; and divers other parts. It is green in winter as well as summer.

GOVERNMENT AND VIRTUES. Both this and the former are under the dominion of Mercury, and so is that also which follows after ; and the virtues of both are so nearly alike, that describing those of the one will equally answer the other.

The decoction of the herb maiden-hair, being drunk, relieveth those that are troubled with a cough, shortness of breath, the yellow jaundice, diseases of the spleen, stoppage of urine, and helpeth exceedingly to break the stone in the kidneys, (in all which cases the wall-rue is also very effectual.) It provoketh women's courses, and stayeth both bleedings and fluxes of the stomach and belly, especially when the herb is dry ; but, when green, it openeth the body, voideth choler and phlegm from the stomach and liver ; it cleanseth the lungs, and, by rectifying the blood, causeth a good colour to the whole body. The herb, boiled in oil of camomile, dissolveth knots, allayeth swellings, and drieth up moist ulcers. The lye made thereof is singularly good to cleanse the head from scurf, and from dry and running sores ; stayeth the falling or shedding of the hair, and causeth it to grow thick, fair, and well-coloured ; for which purpose some boil it in wine, putting

some smallage feed thereto, and afterwards some oil. The wall-rue is as effectual as maiden-hair in all diseases of the head, preventing baldness, and causing the hair to grow again; and generally for all the aforesaid diseases. The powder of it, taken in drink forty days together, helpeth the ruptures in children.

GOLDEN MAIDEN - HAIR.

TO the two former this may be added, which possessing the same virtues, it is therefore needless to repeat them.

DESCRIPTION. It hath many small brownish-red hairs to make up the form of leaves growing about the ground from the root; and in the middle of them, in summer, rise small stalks of the same colour, set with very fine yellowish-green hairs on them, and bearing a small gold yellow head, smaller than a wheat-corn, standing in a great husk. The root is very small and thready.

PLACE. It groweth on bogs and marshy grounds, and also on dry shadowy places; at Hampstead-heath and elsewhere.

MALLOWS AND MARSH-MALLOWS.

COMMON mallows are generally so well known that they need no description.

The common marsh-mallows have divers soft, hoary, white, stalks, rising to the height of three or four feet, spreading forth many branches, the leaves whereof are soft and hairy, somewhat smaller than the other mallow leaves, but longer pointed, cut (for the most part) into some few divisions, but deep. The flowers are many, but smaller also than the other mallows, and white, or tending to a bluish colour; after which come such-like round cases and seed as in the other mallows. The roots are many and long, shooting from one head, of the bigness of a thumb or finger, very pliant, tough, and bending, like liquorice, of a whitish yellow colour on the outside, and more white within, full of a slimy juice, which, being laid in water, will render it as thick as jelly.

PLACE. The common mallows grow in every county in the kingdom. The common marsh-mallows grow in most of the salt marshes from Woolwich down to the sea, both on the Kentish and Essex shores, and in many other places.

TIME. They are in flower all the summer months, and continue till winter.

GOVERNMENT AND VIRTUES. Venus owns them both. The leaves of either of the sorts before specified, and the roots also, boiled in wine or water, or in broth, with parsley or fennel roots, do help to open the body, and are very convenient in hot agues, or other distempers of the body; if the leaves, so boiled, be applied
warm

warm to the belly, it not only voideth hot, cholerick, and other offensive, humours, but easeth the pains and torments of the belly coming thereby; and are therefore used in all clysters conducing to those purposes. The same medicine, when used by nurses, procureth them store of milk. The decoction of the seed of any of the common mallows, made in milk or wine, doth exceedingly help excoriations, the phthisick, pleurisy, and other diseases of the chest and lungs that proceed from hot causes, if continued to be taken for any length of time. The leaves and root have the same effects. They help much also in excoriations of the guts and bowels, and hardness of the mother, and in all hot and sharp diseases thereof. The juice drunk in wine, or the decoction of them therein, help women to more speedy and easy delivery. Pliny saith, that whoever takes a spoonful of any of the mallows shall that day be free from all diseases whatsoever, and that it is a good specific for the falling-sickness. The syrup also, and conserve made of the flowers, are very effectual for the same diseases, and to open the body when costive. The leaves, bruised and laid to the eyes with a little honey, taketh away the imposthumation of them. The leaves bruised or rubbed upon any place stung with bees, wasps, or the like, presently taketh away the pains, redness, and swellings, that arise therefrom. Dioscorides saith, the decoction of the leaves and roots helpeth all sorts of poison, provided the poison is directly voided by vomiting. A poultice made of the leaves, boiled and bruised, to which is added some bean or barley-flour, and oil of roses, is an especial remedy against all hard tumours, inflammations, or imposthumes, swellings of the testicles, and other parts, and easeth the pains of them; also, against the hardness of the liver or spleen, on being applied to the affected places. The juice of mallows, boiled in old oil, taketh away all roughness of the skin, as also the scurf, dandriff, or dry scabs on the head, or other parts, if anointed therewith, or washed with the decoction; and preserveth the hair from falling off. It is also effectual against scaldings and burnings, St. Anthony's fire, and all other hot, red, and painful, swellings in any part of the body. The flowers boiled in oil or water (as every one is disposed), with a little honey and allum put thereto, is an excellent gargle to wash, cleanse, and heal, any sore mouth or throat, in a short space. If the feet be bathed or washed with the decoction of the leaves, roots, and flowers, it helpeth much the defluxions of rheum from the head. If the head be washed therewith, it preventeth baldness. The green leaves (saith Pliny) beaten with nitre and applied to the part, draw out thorns or pricks in the flesh; and, in short, there is no wound, external or internal, for which this is not a sovereign remedy.

The marsh-mallows are most effectual in all the diseases before-mentioned. The leaves are likewise used to loosen the belly gently, and in decoctions for clysters to

ease all pains of the body, opening the straight passages, and making them slippery, whereby the stone may descend the more easily, and without pain, out of the reins, kidneys, and bladder, and to ease the torturing pains thereof; but the roots are of more special use for those purposes, as well as for coughs, hoarseness, shortness of breath, and wheezings, being boiled in wine or honeyed water, and drunk. The roots and seeds hereof, boiled in wine or water, are with good success used by them that have excoriations in the guts, or the bloody flux, by moderating the violence of sharp fretting humours, easing the pains, and healing the soreness; it is successfully taken by them that are troubled with ruptures, cramps, or convulsions of the sinews; and, when boiled in white wine, for imposthumes of the throat, commonly called the king's evil, and of those kernels that rise behind the ears, as well as inflammations or swellings in women's breasts. The dried roots, boiled in milk, and drunk, is very good for the chin-cough. Hippocrates used to give the decoction of the roots, or the juice thereof, to drink, to those that were wounded and ready to faint through loss of blood, and applied the same, mixed with honey and rosin, to the wounds; as also the roots, boiled in wine, to those that had received any hurt by bruises, falls, or blows; or had any bone or member out of joint, or any swelling, pain, or ach, in the muscles, sinews, or arteries. The mucilage of the roots, and of linseed and fenugreek put together, is much used in poultices, ointments, and plaisters, to mollify and digest all hard swellings and the inflammation of them, and to ease pains in any part of the body. The seed, either green or dry, mixed with vinegar, cleanseth the skin from morpew, and all other discolourings, being bathed therewith in the sun.

M A P L E - T R E E.

GOVERNMENT AND VIRTUES. IT is under the dominion of Jupiter. The decoction either of the leaves or bark, greatly strengthens the liver; it is exceeding good to open obstructions both of the liver and spleen; and easeth pains of the sides proceeding from thence.

W I L D M A R J O R A M.

CALLED also *organe*, or *origanum*, bastard marjoram, and grove marjoram.

DESCRIPTION. Wild or field marjoram hath a root which creepeth much under ground, and continueth a long time, sending up sundry brownish, hard, square, stalks, with small dark-green leaves, very like those of sweet marjoram, but harder
and

and somewhat broader; at the tops of the stalks stand tufts of flowers, of deep purplish red colour; the seed is small, and something blacker than that of sweet marjoram.

PLACE. It groweth plentifully on the borders of corn-fields, and in some copses.

TIME. It flowereth toward the latter end of summer.

GOVERNMENT AND VIRTUES. This is under the dominion of Mercury. It strengthens the stomach and head much, there being scarce a better remedy growing for such as are troubled with a sour humour in their stomach; it restores lost appetite; helps the cough, and consumption of the lungs; it cleanseth the body of choler, expelleth poison, and remedieth the infirmities of the spleen; helps the bitings of venomous beasts, and such as have poisoned themselves by eating hemlock, henbane, or opium; it provoketh urine, and the terms in women; helps the dropsy, scurvy, scabs, itch, and the yellow jaundice; the juice being dropped into the ears, relieves deafness, pain, and noise in the ears. There is a deadly antipathy between this herb and the adder.

SWEET MARJORAM.

SWEET marjoram is so well known, being an inhabitant in every garden, that it is needless to write any description either of this, the winter sweet marjoram, or pot-marjoram.

PLACE. They grow commonly in gardens, though there are some sorts to be found growing wild, on the borders of corn-fields and pastures in various parts of the kingdom; yet it would be superfluous to detail them, those produced in gardens being most useful.

TIME. They flower in the end of summer.

GOVERNMENT AND VIRTUES. It is an herb of Mercury, under Aries, and is therefore an excellent remedy for the brain, and other parts of the body and mind under the dominion of the same planet. The common sweet marjoram is warming and comfortable in cold diseases of the head, stomach, sinews, and other parts, taken inwardly, or outwardly applied. The decoction thereof, being drunk, helpeth all diseases of the chest which hinder the freeness of breathing, and is also serviceable in obstructions of the liver and spleen. It helpeth cold complaints of the womb, and the windiness thereof; also the loss of speech, by resolution of the tongue. The decoction thereof made with some pellitory of Spain and long pepper, or with a little *acorus* or *origanum*, being drunk, is good for those that are beginning to fall into a dropsy; for those who are troubled with a retention of water, and against pains and
torments

torments in the belly; it provoketh women's courses, if it be used as a pessary. Being made into powder, and mixed with honey, it taketh away the black marks of blows and bruises, by applying it to the part. It is also good for inflammations of, and water in, the eyes, being mixed with fine flour, and laid upon them. The juice, dropped into the ears, easeth the pains and ringing noise in them. It is of great service when put into those ointments and salves that are made to warm and comfort the outward parts, as the joints and sinews; for swellings also, and places out of joint. The powder thereof, snuffed up into the nose, provoketh sneezing, and thereby purgeth the brain; when chewed in the mouth, it produceth much phlegm. The oil extracted from this herb is very warm and comfortable to joints and sinews that are stiff and hard, tending to molify and supple them. Marjoram is likewise much used in all odoriferous waters, powders, &c.

M A R I G O L D S.

THESE, being so plentiful in almost every garden, are so well known, that they need no description.

TIME. They flower all the summer long, and sometimes in winter, if it be mild.

GOVERNMENT AND VIRTUES. It is an herb of the Sun, and under Leo. They strengthen the heart exceedingly, are very expulsive, and little less effectual, in the small-pox and measles, than saffron. The juice of marigold leaves mixed with vinegar, by bathing any hot swelling therewith, instantly giveth ease, and assuageth the pain. The flowers, either green or dried, are much used in possets, broths and drinks, being comfortable to the heart and spirits, and expelling any malignant or pestilential quality which might annoy them. A plaister made with the dry flowers in powder, hogs-grease, turpentine, and rosin, applied to the breast, strengthens and succours the heart greatly, in fevers, whether epidemical or not.

M A S T E R - W O R T.

DESCRIPTION. COMMON master-wort hath divers stalks of winged leaves divided into sundry parts, three for the most part standing together at a small foot-stalk on both sides of the greater; and three likewise at the end of the stalk, somewhat broad, and cut in on the edges into three or more divisions, all of them dented about the brims, of a dark-green colour, somewhat resembling the leaves of angelica, but that these grow lower to the ground, and on smaller stalks; among which rise up two or three short stalks, about two feet high, and slender, with leaves at the joints similar to those below, but with smaller and fewer divisions, bearing

umbels of white flowers; and, after them, small, thin, flat, blackish seed, larger than dil-seeds; the root is somewhat greater, and groweth slanting into the ground, shooting forth sundry heads, which taste sharp, biting the tongue, and is the hottest and sharpest part of the plant; the seed, next unto it, being somewhat blackish on the outside, and smelling well.

PLACE. It is usually grown in gardens in this kingdom.

TIME. It flowereth and feedeth about the end of August.

DESCRIPTION AND NAMES. It is an herb of Mars. The root of master-wort is hotter than pepper, and very available in all cold griefs and diseases both of the stomach and body, operating very powerfully both upwards and downwards. It is also used in a decoction, with wine, against all cold rheums, or distillations upon the lungs, and shortness of breath, if taken mornings and evenings. It also provoketh urine; helps to break the stone, and expel the gravel from the kidneys; procureth women's courses, and expelleth the dead birth: is singularly good for strangling of the mother, and other similar feminine diseases. It is effectual against the dropsy, cramps, and the falling sickness. The decoction, in wine, being gargled in the mouth, extracteth much water and phlegm from the brain, purging and easing it of what oppresseth it. It is an excellent remedy against all sorts of cold poison; it provoketh sweat: but, lest the taste hereof or of the seed (which worketh to the like effect, though not so powerfully) should be too offensive, the best way is to take the water distilled from both the root and herb. The juice thereof, or tents dipped therein, applied either to green wounds or to filthy rotten ulcers, and such as are given by envenomed weapons, doth very soon cleanse and heal them. It is also a very good preventative against the rheumatism and gout, when they originate from cold.

SWEET MAUDLIN.

DESCRIPTION. COMMON maudlin has somewhat long and narrow leaves, snipped about the edges; the stalks are two feet high, bearing at the tops many yellow flowers, set round together, and all of an equal height, in umbels, with tufts like tansy; after which flowereth small whitish seed, almost as big as worm-feed. This herb is both sweet and bitter.

PLACE AND TIME. It groweth in gardens, and flowereth in June and July.

GOVERNMENT AND VIRTUES. The virtues of this herb are similar to that of costmary, or alecost; it is therefore unnecessary to repeat them.

THE MEDLAR.

DESCRIPTION. THIS tree groweth near the bigness of the quince-tree, with tolerably large spreading branches; longer and narrower leafed than either the apple or quince, and not dented about the edges. At the end of the sprigs stand the flowers, formed of five white, great, broad-pointed, leaves, marked in the middle with some white threads; after which cometh the fruit, of a brownish green colour, when ripe, bearing the resemblance of a crown on the top, which was originally the five green leaves; and, being rubbed off, or having fallen away, the head of the fruit appears somewhat hollow. The fruit is very harsh before it is mellow, and usually hath five hard kernels within it.

There is another kind hereof, differing in nothing from the former, but that it hath some thorns on it, in several places, which the other hath not; and the fruit is small, and not so pleasant.

TIME AND PLACE. They grow in this kingdom, and flower in May generally; they bear ripe fruit in September and October.

GOVERNMENT AND VIRTUES. This tree is under Saturn. A better medicine for strengthening the retentive faculties is hardly to be met with; it stays the longing of women. A plaister made of the fruit, before they are rotten, with other necessary ingredients, applied to the reins of the back, stops the miscarriage of women with child. They are very powerful in staying any fluxes of the blood, or humours, in men or women. The leaves have also the same quality. The fruit, when eaten by women with child, stayeth their longings after unusual meat, and is very effectual for those who are apt to miscarry. The decoction of them is good to gargle and wash the mouth, throat, and teeth; when there is any defluxion of blood, to stay it, or of humours which causeth pains and swellings. It is a good bath for women to sit over that have their courses flow too abundantly; or for the piles, when they bleed too much. A poultice or plaister, made of dried medlars, beaten and mixed with the juice of red roses, a few cloves, some nutmeg, and a little red coral, and applied to the stomach, effectually preventeth the casting or loathing of meat. The dried leaves in powder, strewed on fresh bleeding wounds, restrain the blood and close the wound quickly. The medlar stones, made into powder, and drunk in wine wherein some parsley-roots have been infused, or a little boiled, help to break and expel the stone in the kidneys, and is a perfect cure for the gravel in the most obstinate cases.

MELILOT, OR KING'S-CHAFER.

DESCRIPTION. THIS hath many green stalks, two or three feet high, rising from a tough, long, white, root, which dieth not every year; set round about at the joints with small, and somewhat long, sweet-smelling leaves, three together, unevenly dented about the edges. The flowers are yellow, also of a sweet scent, and formed like other trefoil, but small, standing in small spikes, one above another, for an hand's-breadth long, or more, which afterwards turn into long crooked pods, wherein is contained flat seed, somewhat brown.

PLACE. It groweth plentifully in many parts of this kingdom; on the borders of Suffolk; in Essex, Huntingdonshire, and many other places; but most usually in corn-fields and corners of meadows.

TIME. It flowereth in June and July, and is ripe quickly after.

GOVERNMENT AND VIRTUES. Melilot, boiled in wine, and applied to the parts, mollifies all hard tumours and inflammations that happen in the eye, or other parts of the body; and it is not unusual, in such cases, to add the yolk of a roasted egg, fine flour, poppy-seed, or endive. It healeth spreading ulcers in the head, being washed with lye made thereof; being applied fresh, or boiled with any of the aforementioned articles, it relieves pains in the stomach; it also helpeth pains in the ears, being dropped into them; and, steeped in vinegar and rose-water, it mitigateth the head-ach. The flowers of melilot and camomile are frequently mixed in clysters to expel wind and to ease pains; also into poultices, for the same purpose; and to assuage swellings or tumours in the spleen, or other parts; and helpeth inflammations in any part of the body. The juice, dropped into the eyes, is a singular good medicine to take away any film or skin that cloudeth or dimmeth the eye-sight. The head often washed with the distilled water of the herb and flowers, or a lye made therewith, is effectual for those that have suddenly lost their senses; as also to strengthen the memory, comfort the head and brain, and to preserve them from pains and the apoplexy.

FRENCH AND DOG'S MERCURY.

DESCRIPTION. THIS riseth up with a square green stalk, full of joints, two feet high or thereabouts, with two leaves at every joint, and branches likewise from both sides of the stalk, set with fresh green leaves, somewhat broad and long, about the bigness of the leaves of basil, finely dented about the edges. Towards the tops
of

of the stalks and branches, come forth, at every joint, in the male mercury, two small, round, green, heads, standing together upon a short footstalk, which, when ripe, are the seed, not bearing any flower. In the female, the stalk is longer, spike fashion, set round about with small green husks, which are the flowers, made like small branches of grapes, which give no seed, but remain long upon the stalk without shedding. The root is composed of many small fibres, which perisheth every year on the approach of winter; it riseth again of its own sowing, and, where it is once suffered to sow itself, the ground will never be without it afterwards, even of both sorts, male and female.

French mercury helps conception. Costæus, in his book of the nature of plants, says, that the juice of mercury, holyhock, and purslain, mixed together, and the hand. bathed therein, defendeth them from burning, if they are thrust into boiling lead. This is what shew-men and merry-andrews bathe their mouths with, when they pretend to eat fire.

DOG'S MERCURY.

HAVING described that which is called French mercury, we come now to that which is known by the designation of Dog's mercury.

DESCRIPTION. This is likewise of two kinds, male and female, having many stalks, slenderer and lower than mercury, and without any branches at all upon them. The root is set with two leaves at every joint, somewhat greater than the female, but more pointed and full of veins; somewhat harder in handling; of a darker green colour, and less dented or snipped about the edges. At the joints, with the leaves, come forth longer stalks than the former, with two hairy round seeds upon them, twice as big as those of the former mercury. The taste thereof is harsh, and the smell somewhat strong and virulent. The female has much harder leaves, standing upon longer foot-stalks, and the stalks are also longer. From the joints come forth spikes of flowers similar to those of the French female mercury. The roots of both are numerous, and full of small fibres, which run under ground, and mat themselves very much; not perishing as the former mercury does, but remaining the whole winter, and shooting forth new branches every year, the old ones falling to the ground.

PLACE. The male and female French mercury are found wild in divers parts of the kingdom: particularly at a village called Brookland, in Romney-marsh, in the county of Kent.

The dog's mercury is to be found in various parts of Kent, and elsewhere; but the female is more seldom to be met with than the male.

TIME.

TIME. They flourish in the summer months, and then produce their seed.

GOVERNMENT AND VIRTUES. Mercury, it is said, owns this herb, but we are of opinion that it is under the dominion of Venus. The decoction of the leaves of mercury, or the juice thereof, in broth, or drunk with a little sugar put to it, purgeth cholerick and watery humours. Hippocrates commendeth it wonderfully for women's diseases; when applied to the secret parts, it easeth the pains of the mother; and, when used as a decoction, helps women's courses, and expels the after-birth; the decoction, mixed with myrrh or pepper, or applying the leaves externally, is effectual against the stranguary and diseases of the reins and bladder. It is also useful for sore and watery eyes, and for deafness and pains in the ears, by dropping the juice into them, and bathing them afterwards in white wine. The decoction thereof made with water and a cock chicken, is a safe medicine against hot fits of the ague. It also cleanseth the lungs and stomach of phlegm, though rather offensive to the stomach. The juice, or distilled water, snuffed up into the nostrils, purgeth the head and eyes of catarrhs and rheums. Two or three ounces of the distilled water, with a little sugar, are sometimes taken, in the morning, fasting, to open and purge the body of gross, viscous, and melancholy humours. What Dioscorides and Theophrastus relate of this herb is truly wonderful, if not fabulous, viz. that, if women use them, either inwardly or outwardly, for three days together, after conception, and their menses be stopped, they shall bring forth male or female children according to the kind of herb which they use. Mathioli faith, that the seed, both of the male and female mercury, boiled with wormwood, and drunk, cureth the yellow jaundice in a speedy manner. The leaves, or the juice, rubbed upon warts, taketh them away. The juice, mixed with some vinegar, helpeth all running scabs, tetters, ring-worms, and the itch. Galen faith, that being applied, in the manner of a poultice, to any swelling or inflammation, it digesteth the swelling, and allayeth the inflammation; and is therefore given in clysters to evacuate offensive humours from the belly. Dog's mercury, though less used, is notwithstanding serviceable in purging off watery and melancholy humours.

M I N T.

DESCRIPTION. OF all the kinds of mints, the spear-mint, or hart-mint, is the most useful; the description thereof will therefore be sufficient. Spear-mint hath divers round long stalks, but narrow leaves set thereon; of a dark green colour. The flowers stand in spiked heads at the tops of the branches, being of a pale bluish colour. The smell or scent thereof is somewhat similar to basil; it increaseth by the root, under ground, as all the others do.

PLACE. It is an usual inhabitant of gardens ; and, though it seldom giveth any good seed, yet this defect is recompensed by the plentiful increase of the root, which being once planted in a garden, is hardly to be eradicated. It flowers in August.

GOVERNMENT AND VIRTUES. It is an herb of Venus. Dioscorides saith, it hath a heating, binding, and drying, quality ; therefore the juice, taken with vinegar, stayeth bleeding ; it is an incentive to venery and bodily lust. Two or three branches thereof, taken with the juice of four pomegranates stayeth the hiccough, vomiting, and allayeth choler. It dissolveth imposthumes, being applied with barley-meal. It is good to repress the milk in women's breasts ; and for such as have swoln, flagging, or large, breasts. Applied with salt, it helpeth the bite of a mad dog ; with mead or honeyed water, it easeth the pains of the ears, and taketh away the roughness of the tongue, being rubbed thereupon. If the leaves are boiled or steeped in milk before drinking, it hindereth the curdling thereof on the stomach. In short, it is a very powerful stomachic. The frequent use hereof is very efficacious in stopping women's courses and the whites. Applied to the forehead or temples, it easeth pains of the head ; it is good to wash the heads of young children, being a preventative against all manner of breakings out, sores, or scabs, thereon ; it also healeth chaps in the fundament, and is exceedingly useful against the poison of venomous creatures. The distilled water from mint, is available for all the purposes aforesaid, yet more weakly ; but the spirit thereof, when properly and chemically drawn, is much more powerful than the herb itself. Simeon Sethi saith, it helpeth a cold liver ; strengtheneth the belly and stomach ; causeth digestion ; stayeth vomiting and the hiccough ; is good against the gnawing of the heart ; provoketh appetite ; taketh away obstructions of the liver, and stirreth up bodily lust ; but it must not be taken in too great quantities, as it tends to make the blood thin and wheyish, and turneth it into choler ; therefore choleric people must abstain from it. It is a safe medicine for the bite of a mad * dog, being bruised with salt, and applied to the wound. The powder of it, being dried, and taken after victuals, helpeth digestion, and those that are splenetic. Taken in wine, it helpeth women in fore travail in child-bearing. It is good against the gravel and stone in the kidneys, and the strangury. Being smelled unto, it is comfortable for the head and memory. The decoction thereof, when used as a gargle, cureth the mouth and gums, when sore, and helpeth a stinking breath ; when mixed with rue and coriander, also used

* For the bite of a mad dog, the author's *Solar Tincture* combines all the virtues of this and other such herbs, and is an infallible remedy, whether the bite is received by man or beast. Let the part bitten be washed clean out, after which, pour the Tincture in and round the affected part, and wherever the hydrophobia is supposed to have fallen. Bind on some lint dipped three or four times, and let a few drops be taken frequently in a wine glass of water.

as a gargle, it causeth the palate of the mouth to return to its place, when down. Mint, saith Pliny, exhilarates the mind, and is therefore proper for the studious. When put into any vessel containing milk, it hindereth the curdling thereof, and no butter can be got therefrom.

The virtues of the wild or horse mint, which grows in ditches, and by the sides of rivers (the description which is unnecessary, being so well known), are especially to dissolve wind in the stomach, to help the cholic, and those that are short-winded, and are an effectual remedy against venereal dreams and pollutions in the night, being outwardly applied to the testicles. The juice dropped into the ears easeth the pains thereof and destroyeth the worms that breed therein. They are good against the venomous biting of serpents. The juice, laid on warm, helpeth the king's-evil, or kernels in the throat. The decoction, or distilled water, helpeth a stinking breath proceeding from the corruption of the teeth; and, snuffed up into the nose, purgeth the head. Pliny saith, that eating of the leaves, and applying some of them to the face, have been found, by experience, to cure the leprosy, and, when used with vinegar, to help the scurf or dandriff of the head.

They are extremely bad for wounded people, it being asserted, that whoever eats mint, when wounded, will never be cured.

MISLETOE.

DESCRIPTION. This riseth up from the branch or arm of the tree whereon it groweth, with a woody stem, parting itself into sundry branches, and they are again divided into many other smaller twigs, interlacing themselves one within another, very much covered with a greyish green bark, having two leaves set at every joint, and at the end likewise, which are somewhat long and narrow, small at the bottom, but broader towards the end. At the knots or joints of the boughs and branches grow small yellowish flowers, which turn into small, round, white, transparent, berries, three or four together, full of glutinous moisture, with a blackish seed in each of them, which was never yet known to produce any thing, though planted in gardens, and other places, for the purpose of trying it.

PLACE. It groweth very rarely on oak-trees in this kingdom, but upon sundry others, as well timber as fruit trees; and is to be met with in woods, groves, &c.

TIME. It flowereth in the spring time, but the berries are not ripe until October, and, remaining on the branches, serve the birds for food in severe weather.

GOVERNMENT AND VIRTUES. That it is under the dominion of the Sun is without a doubt; that which grows upon the oak participates something of the nature of Jupiter, because an oak is one of his trees; as also that which grows upon pear-trees and apple-trees participates something of that nature, because he rules the

trees

trees it grows upon, having no root of its own; but why that should have more virtue that grows upon the oak is not so easily determinable, unless because it is rarest and hardest to be come at. Clusius asserts, that that which grows upon pear-trees is equally efficacious with the other sorts, provided it doth not touch the ground after it is gathered; and also saith, that, being hung about the neck, it remedies witchcraft. Both the leaves and berries of mistletoe are of a hot and dry nature, and of subtle parts. Bird-lime, made thereof, doth mollify hard knots, tumours, and imposthumes; ripening and discussing them; draweth forth thick as well as thin humours from the remote parts of the body, digesting and separating them; and, being mixed with equal parts of rosin and wax, mollifies the hardness of the spleen, and healeth old ulcers and sores; being mixed with sandarac and orpiment, with quick-lime and wine lees added thereto, it draws off foul nails from the flesh. Mathiolus saith, that the mistletoe of the oak (being the best), made into powder, and given in drink to those that have the falling sickness, doth assuredly heal them; provided it be taken forty days together. Some hold it so highly in estimation, that it is termed *lignum sanctæ crucis*, or wood of the holy cross, believing it to help the falling sickness, apoplexy, and palsy, very speedily, not only when taken inwardly, but applied externally, by hanging it about the neck. Tragus saith, that by bruising the green wood of any mistletoe, and dropping the juice so drawn therefrom into the ears of those who are troubled with imposthumes, it healeth the same in a few days.

The powder of it also cures apleurisy, and forces the courses. Some think the mistletoe that grows on the hazel-tree is better for the falling sickness, and other diseases of the head, than that which grows on the oak. Henricus ab Steers thinks it does not grow on hazel-trees till they are about an hundred years old. A young lady, having been long troubled with the falling sickness, for which she had taken every thing prescribed for her by the most famous doctors, without effect, but growing rather worse, having eight or ten dreadful fits in a day, was cured only by the powder of true mistletoe, given, as much as would lie on a sixpence, early in the morning, in black cherry-water, or in beer, for some days near the full moon.

MONEY-WORT, OR HERB-TWOPENCE.

DESCRIPTION. THE common money-wort sendeth forth from a small thready root, divers long, weak, and slender, branches, lying and running upon the ground, two or three feet long or more, set with leaves two at a joint, one against another at equal distances, which are almost round, but jointed at the ends, smooth, and of a good green colour. At the joints; with the leaves from the middle forward, come
forth

forth at every joint sometimes one yellow flower, and sometimes two, standing each on a small foot-stalk, formed of five leaves, narrow and pointed at the ends, with some yellow threads in the middle; which being past, there come in their places small round heads of seed.

PLACE. It groweth plentifully in almost every part of the kingdom, commonly in moist grounds, by the sides of hedges, and in the middle of grassy fields.

TIME. They flower in June and July, and their seed is ripe quickly after.

GOVERNMENT AND VIRTUES. Venus owns it. Money-wort is singularly good to stay all fluxes in man or woman, whether they be lasts, bloody fluxes, the flowing of women's courses, bleedings inwardly or outwardly, and the weakness of the stomach that is given to casting. It is also very good for all ulcers or excoriations of the lungs, or other inward parts. It is exceeding good for all wounds, whether fresh and green, or old ulcers of a spreading nature, and healeth them speedily; for all which purposes, the juice of the herb; the powder drunk in water wherein hot steel hath been often quenched; the decoction of the green herb in wine or water drunk; the seed, juice, or decoction used to wash or bathe the outward places; or to have tents dipped therein and applied to the wounds; are effectual.

MOON - WORT.

DESCRIPTION. IT riseth up, usually, but with one dark-green, thick and flat, leaf, standing upon a short foot-stalk, not above two fingers breadth; but, when it flowers, bears a small slender stalk, about four or five inches high, having but one leaf set in the middle thereof, which is much divided on both sides, into sometimes five or seven parts on a side, and sometimes more, each of which parts is small next the middle rib, but broad forwards, and round pointed, resembling a half-moon, from whence it takes its name, the uppermost parts or divisions being less than the lowest. The stalk riseth above this leaf two or three inches, bearing many branches of small long tongues, everyone like the spiky head of adders-tongue, of a brownish colour, which, whether they may be called the flowers, or seed, is not so well certified; but, after continuing a while, resolve into a mealy dust. The root is small and fibrous. This hath sometimes divers such-like leaves as are before described, with so many branches or tops rising from one stalk, each divided from the other.

PLACE. It groweth on hills and heaths, particularly where there is plenty of grass.

No. 17.

3 U

TIME.

TIME. It is to be found only in April and May; but in June, if hot weather cometh, it generally withers and dies.

GOVERNMENT AND VIRTUES. The moon owns this herb. Moon-wort is cold and drying, in a greater degree even than adders-tongue, and is therefore serviceable in all wounds, both inward and outward. The leaves boiled in red wine, and drunk, stay the immoderate flux of women's courses, and the whites. It also stayeth bleeding, vomiting, and other fluxes; helpeth all blows and bruises, and consolidates fractures and dislocations. It is good for ruptures; but is chiefly used by most, with other herbs, to make oils, or other balsams, to heal fresh or green wounds, either inward or outward, for which it is exceeding good, as is before observed.

Alchymists say, that this herb is peculiarly useful to them in making silver; and it is reported, that whatever horse casually treads upon this herb will lose his shoes; it is also said to have the virtue of unlocking their fetlocks and causing them to fall off; but whether these reports be fabulous or true, it is well known to the country people by the name of Unshoe-horse. Galen saith, that, if it be given to such as are enraged by the biting of a mad dog, it doth perfectly cure them.

M O S S.

IT would be needless to trouble the reader with a description of every kind of moss; that of the ground-moss and tree-moss, which are both well-known, being sufficient for our purpose.

PLACE. The ground-moss grows in moist woods, at the bottoms of hills, in boggy grounds, shadowy ditches, and other such-like places, in all parts of the kingdom.

The other groweth only upon trees.

GOVERNMENT AND VIRTUES. All sorts of moss are under the dominion of Saturn. The ground moss, being boiled in wine, and drunk, is held to be very efficacious in breaking the stone, and to expel and drive it forth by urine. The herb, bruised and boiled in water, and applied, easeth all inflammations and pains proceeding from hot causes; and is therefore used to relieve pain arising from the gout.

The different kinds of tree-moss are cooling and binding, and partake of a digesting and mollifying quality withal, as Galen saith. But each moss doth partake of the nature of the tree from whence it is taken; therefore that of the oak is more binding, and is of good effect to stay fluxes in men or women; as also vomitings or bleedings, the powder thereof being taken in wine. The decoction thereof in wine

is

Is very good for women to be bathed with, or to sit over, that are troubled with the overflowings of their courses. The same, being drunk, stayeth the stomach that is troubled with casting, or the hiccough; and, Avicenna saith, it comforteth the heart. The powder thereof, taken in drink for some time together, is thought available for the dropfy. The oil of roses, which has had some fresh moss steeped therein for a time, and afterwards boiled and applied to the temples and forehead, doth wonderfully ease the head-ach, arising from a hot cause; as also the distillation of hot rheum or humours from the eyes, or other parts. The ancients used it much in their ointments and other medicines, against lassitude, and to strengthen and comfort the sinews; it may, consequently, be applied by the moderns with equal success.

MOTHER-WORT.

DESCRIPTION. This hath a hard, square, brownish, rough, strong, stalk, rising three or four feet high at least, spreading into many branches, whereon grow leaves on each side, with long foot-stalks, two at every joint, which are somewhat broad and long, as it were rough or crumpled, with many great veins thereon, of a sad-green colour, deeply dented about the edges, and almost divided. From the middle of the branches, up to the tops of them (which are very long and small), grow the flowers round about them, at distances, in sharp-pointed, rough, hard, husks, of a more red or purple colour than balm or horehound, but in the same manner or form as horehound; after which come small, round, blackish, seeds, in great plenty. The root sendeth forth a number of long strings and small fibres, taking strong hold in the ground, of a dark yellowish or brownish colour, and remaineth as the horehound doth; the smell of this being not much different from it.

PLACE. It is only produced in gardens in this kingdom.

GOVERNMENT AND VIRTUES. Venus owns this herb, and it is under Leo. There is no better herb to drive melancholy vapours from the heart, to strengthen it, and make the mind cheerful, blithe, and merry. It may be kept in a syrup or conserve, therefore the Latins call it *cordiaca*. The powder thereof, to the quantity of a spoonful, drunk in cold wine, is a wonderful help to women in fore travail, as also for suffocations or risings of the mother; and from these effects it most likely got the name of mother-wort. It also provoketh urine, and women's courses; cleanseth the chest of cold phlegm oppressing it, and killeth worms in the belly. It is of good use to warm and dry up the cold humours; to digest and disperse them that are settled in the veins, joints, and sinews, of the body, and to help cramps and convulsions.

MOUSE-EAR.

DESCRIPTION. Mouse-ear is a low herb, creeping upon the ground, by small strings like the strawberry plant, from which it shooteth forth small roots, whereat grow, upon the ground, many small and somewhat short leaves, set in a round form together, hollowish in the middle, where they are broadest; of an hoary colour all over, and very hairy, which, being broken, produce white milk. From among these leaves spring up two or three small hoary stalks, about a span high, with a few smaller leaves thereon; at the tops whereof standeth usually but one flower, consisting of many paler yellow leaves, broad at the points, and a little dented in, set in three or four rows, the largest outermost, very like a dandelion flower, and a little reddish underneath about the edges, especially if it grow in dry ground; which, after they have stood long in flower, turn into down, which, with the seed, is blown away by the wind.

PLACE. It groweth on the banks of ditches, and in sandy ground.

TIME. It flowereth in June and July, and remaineth green all the winter.

GOVERNMENT AND VIRTUES. The moon owns this herb also. The juice thereof, taken in wine, or the decoction thereof drunk, doth help the jaundice, although of long continuance; it is a special remedy against the stone, and griping pains of the bowels. The decoction thereof, with succory and centaury, is held very effectual to help the dropfy, and them that are inclining thereunto, as well as diseases of the spleen. It stayeth the fluxes of blood, whether at the mouth or nose, and inward bleedings also; it is very efficacious for wounds both inward and outward; it helpeth the bloody flux, and the abundance of women's courses.* There is a syrup made of the juice thereof, and sugar, by the apothecaries of Italy, and other places, which is accounted very serviceable to those that are troubled with the cough or phthisic. The same is also singularly good for ruptures or burstings. The green herb, bruised, and directly applied to any fresh cut or wound, doth quickly heal it; and the juice, decoction, or powder of the dried herb, is very good to stay the malignity of spreading and fretting cankers and ulcers. The distilled water of the plant is available in all the diseases aforesaid, and to wash outward wounds and sores, and by applying tents or cloths wet therein.

* To stay the abundance of women's courses, and to keep them in due proportion, and regular, no medicine in the whole *Materia Medica* was ever found so efficacious as the author's Lunar Tincture; the inherent virtues of which contain the salubrious qualities of this and all other lunar herbs congenial to the female sex.

MUGWORT.

DESCRIPTION. COMMON mugwort hath divers leaves lying upon the ground, very much divided, or cut deeply in about the brims, somewhat like wormwood, but much larger; of a dark green colour on the upper side, and very hoary, white, underneath. The stalks rise to the height of four or five feet, having on it similar leaves to those below, but somewhat smaller, branching forth very much towards the top, whereon are set very small pale yellowish flowers like buttons, which fall away; and after them come small seed inclosed in round heads. The root is long and hard, with many small fibres growing from it, whereby it taketh strong hold in the ground; but both stalk and leaf die every year, and the root shooteth forth anew in the spring. The whole plant is of a tolerably good scent, and is more readily propagated by the slips than by the seed.

PLACE. It groweth plentifully in many parts of this kingdom, by the road-side; also, by small water-courses; and in divers other places.

TIME. It flowereth and seedeth in the end of summer.

GOVERNMENT AND VIRTUES. This is an herb of Venus; therefore maintaineth the parts of the body she rules, and remedies the diseases of the parts that are under her signs, Taurus and Libra. Mugwort is used with good success, among other herbs, in a hot decoction, for women to sit over, to provoke the courses, help delivery, and expel the after-birth; also, for the obstructions and inflammations of the mother. It breaketh the stone, and causeth one to make water when it is stopped. The juice thereof, made up with myrrh, and formed into a pessary, worketh the same effects; the root, being made into an ointment, with hogs-lard, taketh away wens and hard knots and kernels that grow about the neck and throat, and easeth pains about the neck more effectually, if some field daisies be put with it. The herb itself, being fresh, or juice thereof, taken, is a special remedy for an over-dose of opium. Three drams of the powder of the dried leaves, taken in wine, is a speedy, and the most certain, cure for the sciatica. A decoction thereof, made with camomel and agrimony, taketh away pains of the sinews and the cramp, if the place is bathed therewith while warm.

The leaves and flowers, and the tops of the young shoots, in this plant, are all full of virtue; they are aromatic to the taste, with a little sharpness; and are a most safe and excellent medicine in female disorders arising from obstruction.

The herb has been famous for this from the earliest time; and Providence has placed it every where about our doors; so that reason and authority, as well as the

notice of our senses, point it out for use ; but chemistry has banished natural medicines. Dioscorides bestows high praises on the herb ; and directs the flowery tops to be used, just before they open into bloom ; he determines the dose to be three drams ; and the manner of taking it as tea. It is happy that the ancients, who saw the great effect of these medicines, have been so accurate in the dose and manner of giving them ; wherever they have, we find them always right, and may depend on them as our best guides ; where they have not been so particular, no guess, or bold opinion, is to be indulged ; but all is to be learned from careful trial. To be assured of their medicines, is the first care : and, that being ascertained, we shall be certain to find the accounts they give us of their virtues true, if we will wait with patience till we find the dose, beginning from a little. The many who apply, wearied with the expence, and tired with the vain hope of relief from the common practice, give abundant opportunities of finding this safely and exactly ; and, if this publication conveys clearly to mankind the way to reap the advantages of ancient Galenical medicines, the attention to the object will have been well bestowed.

There is no better medicine for young women, in whom the efforts of nature are too weak, than this : the flowers and buds should be stripped off from the tops of stalks ; three drams of these, clipped small, should be put into a basin, and half a pint of boiling water poured upon them : and when just cool it is to be drunk with a little sugar and cream : this is to be taken twice a day, during the time of nature's effort, and she will rarely want any farther help ; but, if its effect be not altogether sufficient, such a tea of it should be drunk afterwards every day. Nothing is so destructive to the constitution as the use of too powerful medicines on this occasion ; this is sufficient, and can do no harm. But it is not to this time of life it is limited, it may be taken at any period ; and there is a peculiar way of using it to great advantage. A lady of thirty-eight, unmarried, and healthy, after riding many mornings on horseback, (a new exercise to her, and therefore over-pleasing,) found herself disappointed at the period of her expectation ; with feverish heat, pain, swelling, and, I believe, inflammation. She had been blooded in the foot ; had taken penny-royal water ; and was entering upon something of more power, when, being informed by another lady of the virtues of this herb, and that the excellent Dioscorides, a better physician than Friend or Mead, advised the sitting over the steam of a decoction of it on certain occasions ; and that, in this particular case, that way seemed in every sense most proper. A pound of mugwort was boiled in two gallons of water ; the whole was put together into a pan ; and, when the vapour was not too hot to be borne, the lady sat over it. It was done at night ; and, before morning, all was well and happy.

THE MULBERRY TREE.

THIS is so well known, where it groweth, that it needeth no description.

TIME. It beareth fruit in the months of July and August.

GOVERNMENT AND VIRTUES. Mercury rules the tree; therefore are its effects variable as his are. The mulberry partakes of different and opposite qualities; the ripe berries, by reason of their sweetness and slippery moisture, opening the body, and the unripe binding it, especially when they are dried; and then they are good to stay fluxes, lasks, and the abundance of women's courses. The bark of the root killeth the broad worms in the body. The juice, or the syrup made of the juice, of the berries, helpeth all inflammations or sores in the mouth or throat, and the pallet of the mouth when it is fallen down. The juice of the leaves is a remedy against the biting of serpents, and for those that have taken aconite; the leaves, beaten with vinegar, are good to lay on any place that is burnt with fire. A decoction made of the bark and leaves, is good to wash the mouth and teeth when they ach. If the root be a little slit or cut, and a small hole made in the ground next thereunto, in the harvest time, it will give out a certain juice, which being hardened the next day, is of good use to help the tooth-ach, to dissolve knots, and purge the belly. The leaves of mulberries are said to stay bleeding at the mouth or nose, the bleeding piles, or of any wound, being bound unto the places. A branch of the tree, taken when the moon is at the full, and bound to the wrist of a woman whose courses overflow, stays them in a short space.

MULLEIN.

DESCRIPTION. COMMON white mullein hath many fair, large, woolly, white leaves lying next the ground, somewhat longer than broad, pointed at the ends, and dented as it were about the edges; the stalk riseth up to be four or five feet high, covered over with such-like leaves, but smaller, so that no stalks can be seen for the quantity of leaves thereon, up to the flowers, which come forth on all sides of the stalk, generally without any branches, and are many set together in a long spike, in some of a gold yellow colour, in others more pale, consisting of five round pointed leaves, which afterwards have little round heads, wherein a small brownish seed is contained. The root is long, white, and woody; perishing after it hath borne seed.

PLACE. It groweth by road-sides and lanes in many parts of the kingdom.

TIME. It flowereth in July, or thereabouts.

GOVERN-

GOVERNMENT AND VIRTUES. It is under the dominion of Saturn. A small quantity of the root, given in wine, is commended by Diofcorides againſt laſks and fluxes. The decoction thereof, being drunk, helpeth ruptures, cramps, and convulſions, and thoſe that are troubled with an old cough; and, when uſed as a gargle, eaſeth the tooth-ach. An oil, made by frequently infuſing the flowers, has a very good effect on the piles. The decoction of the root, in red wine, or in water (if attended with an ague) wherein red hot ſteel hath been often quenched, ſtayeth the bloody flux; and alſo openeth obſtructions of the bladder and reins, when there is a ſtoppage of urine. A decoction of the leaves thereof, and of ſage, marjoram, and camomile flowers, and the ſinews being bathed therewith that are benumbed with cold, or cramps, doth much eaſe and comfort them. Three ounces of the diſtilled water of the flowers, drunk morning and evening, for ſome days together, are ſaid to be an excellent remedy for the gout. The juice of the leaves and flowers being laid upon rough warts, as alſo the powder of the dried roots, when rubbed on, doth take them away; but have no effect upon ſmooth warts. The powder of the dried flowers is an eſpecial remedy for thoſe that are troubled with the cholic or belly-ach. The decoction of the root, and likewiſe of the leaves, is of great effect in diſſolving tumours, ſwellings, or inflammations of the throat. The ſeed and leaves boiled in wine, and applied to the place, ſpeedily draweth forth thorns and ſplinters from the fleſh, eaſing the pain and healing the wound at the ſame time. The leaves, bruised and wrapped in double papers, and covered with hot aſhes and embers, in which they muſt be baked for ſome time, and then taken and laid on any blotch or boil, diſſolve and heal them.

M U S T A R D:

DESCRIPTION. OUR common muſtard hath large and broad rough leaves, very much jagged with uneven and diſorderly gathes, ſomewhat like turnip leaves, but ſmaller and rougher; the ſtalk riſeth to be upwards of a foot high, and ſometimes two feet high; being round, rough, and branched at the top, bearing ſimilar leaves thereon to thoſe below, but ſmaller and leſs divided, and divers yellow flowers one above another at the tops, after which come ſmall rough pods, with ſmall lank flat ends, wherein is contained round yellowiſh ſeed, ſharp, hot, and biting to the tongue. The roots are ſmall, long, and woody, when it beareth ſtalk and periſheth every year.

PLACE. This groweth in gardens only, and other manured grounds.

TIME. It is an annual plant, flowering in July, and the ſeed is ripe in Auguſt,

GOVERNMENT AND VIRTUES. It is an excellent sauce for those whose blood wants clarifying, and for weak stomachs, being an herb of Mars; it is hurtful to cholerick people, but highly serviceable to those who are aged, or troubled with cold diseases. Aries claims some share of dominion over this plant; it therefore strengthens the heart, and resisteth poison; let such whose stomachs are so weak that they cannot digest their victuals, or have no appetite thereto, take of mustard-seed a dram, cinnamon as much, and, after beating them to powder, add half as much powder of mastic, and, with gum arabic dissolved in rose water, make it up into troches, of which the quantity of half a dram may be taken an hour or two before meals, and the good effects thereof will soon be apparent, more particularly to the aged of either sex. Mustard-seed hath the virtue of heating, discussing, rarefying, drawing out splinters of bones, and other things, out of the flesh; provokes the menses; is good for the falling sickness, lethargy, drowsiness, and forgetfulness, by using it both inwardly and outwardly, rubbing the nostrils, forehead, and temples, to warm and quicken the spirits, as, from its fierce sharpness, it purgeth the brain by sneezing, and drawing down rheums, and other viscous humours, which, by their distillation upon the lungs and chest, cause coughing; when taken inwardly it operates more forcibly if mixed with honey. The decoction of the seed made in wine, provoketh urine, resists the force of poison, the malignity of mushrooms, and the venom of scorpions, or other poisonous animals, if it be taken in time. If administered before cold fits of the ague come on, it altereth, lesseneth, and cureth, them. The seed, taken either by itself, or with other things, either in an electuary or drink, is a great incentive to venery, and helpeth the spleen, pains in the side, and gnawing the bowels. If used as a gargle, it draweth up the pallet of the mouth, when fallen down. It also dissolveth swellings about the throat, if it be applied externally. Being chewed in the mouth, it oftentimes helpeth the tooth-ach. The outward application hereof upon the pained place, in cases of the sciatica, discusseth the humours, and easeth the pains: as also of the gout, and other joint-achs. It is frequently used to ease pains of the sides, loins, shoulders, or other parts of the body, by applying thereof as a blister, and cureth the disease by drawing it to the outward part of the body; it is also used to help the falling of the hair. The seed, bruised, and mixed with honey or wax, taketh away the black and blue marks occasioned by falls or other bruises; the roughness or scabbedness of the skin; as also the leprosy and lousy evil; it helpeth also the crick in the neck. The distilled water of the herb, when it is in flower, is much used to drink inwardly for any of the diseases aforesaid, and to wash the mouth when the pallet is down; and as a gargle for dis-

eases of the throat; also outwardly for scabs, itch, or other such infirmities; and cleanseth the face from morpew, spots, freckles, and other deformities.

People who are fond of music, and would wish to improve their voices, have only to mix some of the powder of mustard seed with honey into balls, and, by swallowing one or two every morning fasting, in a short time they will find their voices to be clear. Mustard seed and onions, mixed together, provoke weeping.

HEDGE - MUSTARD.

DESCRIPTION. THIS groweth up usually but with one blackish green stalk, tough, easy to bend, but not break; branched into divers parts, and sometimes with divers stalks set full of branches, whereon grow long, rough, or hard rugged leaves, very much torn or cut on the edges into many parts, some larger and some smaller, of a dirty green colour; the flowers are small and yellow, growing at the tops of the branches in long spikes, flowering by degrees; the stalks have small round pods at the bottom, growing upright, and close to the stalk, whilst the flowers yet shew themselves; in which are contained small yellow seed, sharp and strong, as the herb is also. The root groweth down slender and woody, yet abiding, and springing again every year.

PLACE. This groweth generally by the roads and hedge-sides; but sometimes in the open fields.

TIME. It flowereth usually about July.

GOVERNMENT AND VIRTUES. Mars owns this herb also. It is singularly good in all the diseases of the chest and lungs, hoarseness of voice; and, by the use of the decoction thereof, some have been recovered who had utterly lost their voices, and nearly their spirits also. The juice of this herb, made into a syrup with honey or sugar, is no less effectual for the same purposes, and for coughs, wheezing, and shortness of breath. It is also serviceable to those who have the jaundice, the pleurisy, pains in the back and loins, and for torments in the belly, or the cholic; it is also used in clysters. The seed is held to be a special remedy against poison and venom, is singularly good for the sciatica, the gout, and all joint-achs, sores and cankers in the mouth, throat, or behind the ears; it is also equally serviceable in reducing the hardness and swelling of the testicles, and of women's breasts.

MASTIC TREE.

NAMES. IT is called in Latin *lentiscus*, and the gum or rosin, *resina lentiscina*, and *maſtiche*, and *maſtix*; in English, mastic.

DESCRIP-

DESCRIPTION. The mastic or lentisk tree groweth like a tree when suffered to grow up; and often it riseth but as a shrub; the body and branches are of a reddish colour; tough and gentle, having their ends bending somewhat downwards, whereon do grow winged dark-green leaves, consisting of four couple, standing one against another, of the bigness of the large myrtle-leaf, with a reddish circle about their edges, and somewhat reddish veins on the under-side, smelling sweet, and always continuing green; the flowers grow in clusters at the joints, with the leaves, being small and of a pale purple green colour; after them come small blackish berries, of the size of a pepper-corn, with a hard black shell under the outer skin, and a white kernel within; it beareth also certain horns, with a clear liquor in them that turneth into small flies. It yieldeth also a clear white gum, in small drops, when the stocks are cut in sundry places; which is carefully gathered and preserved.

PLACE. The lentisk-tree groweth in Provence, in France; and also in divers parts of Italy; in Candia, and many other places in Greece; but yieldeth little gum there, especially in the isle of Scio.

TIME. It flowereth in April, and the berries are ripe in September; it is pruned and manured with as great care by the cultivators as others do their vines; the profit arising from the gum being much greater.

GOVERNMENT AND VIRTUES. The lentisk-tree is under the influence of Jupiter. It is of a moderately hot temperature; but the root, branches, bark, leaves, fruit, and gum, are all of a binding quality, stopping all fluxes and spitting of blood; strengthens a weak stomach, and helps falling down of the mother and fundament. The decoction healeth up hollow sores, knitteth broken bones, fasteneth loose teeth, and stayeth the spreading of sores, they being fomented therewith. The oil which is pressed out of the berries, helpeth the itch, leprosy, and scab, both in man and beast; gum-mastic hath the like virtue of staying fluxes, taken any way in powder; or, if three or four grains of it be swallowed whole at night when going to bed, it not only easeth the pains of the stomach, but hindereth its being affected afterwards; the powder of mastic, with amber and turpentine, is good against the running of the reins, and to check the fluor albus and menses in women. The powder of mastic is also materially useful in stopping thin rheums from falling upon the lungs, which occasion a continual cough and spitting of blood.

THE MEALY TREE.

NAMES: IT is called in Latin *viburnum*; it is also called the way-faring tree; and by Mr. Parkinson, from the pliability of the twigs and branches, the pliant mealy tree.

DESCRIP-

DESCRIPTION. This tree hath (from a small body, rising to the height of a hedge-tree, or bush, covered with a dark-greyish bark) sundry small short but very tough and pliant branches, of a finger's thickness, whose bark is smooth and whitish, whereon grow broad leaves, like elm-leaves, but long and hoary, rough, thick, and white like meal, and a little hairy, set by couples, and finely dented about the edges; at the ends of the branches stand large tufts of white flowers, which turn into large bunches of round and flat seed, like that of the lentil, but larger; green when they are first formed, and for a considerable time afterwards, but black when they are ripe.

The branches thereof are so tough and strong that they serve for bands to tie bundles, or any other thing; or to make fast gates leading into fields, for which purposes they are better adapted than withy, or any thing of that nature.

PLACE. It groweth as a hedge-bush, and is often cut and plashed by country people to spread on the hedges; is very frequently found in Kent, and in many other parts of this kingdom.

TIME. It flowereth about the end of May, and the fruit is ripe in September.

GOVERNMENT AND VIRTUES. It is a plant of Saturn. The leaves thereof have a harsh binding quality, and are good to strengthen and fasten loose teeth. The decoction of the leaves thereof, and of olive-leaves together, in vinegar and water, is exceeding good to wash the mouth and throat when swelled by sharp humours falling into them; restores the uvula or palate of the mouth to its right place, when fallen down; it also stays the rheums that fall upon the jaws. The kernels of the fruit hereof, taken before they are ripe, dried and made into powder, and drunk in any liquid, stop looseness of the belly, and all sorts of fluxes. Of the roots, being steeped under ground, then boiled, and beaten a long time afterwards, bird-lime is made to catch small birds.

The leaves, boiled in lye, keep the hair from falling off the head, and change the colour into black.

M A Y- W E E D.

KINDS AND NAMES. THERE are found three sorts of may-weed. 1. *Cotula fetida*, stinking may-weed. 2. *Cotula non fetida*, may-weed with no scent. Stinking may-weed groweth more upright than that which hath no smell, or the common camomile; neither of them creep or run on the ground as camomile doth; the leaves are longer and larger than those of camomile, yet very like unto it, but of a paler green colour; the one sort hath a very strong smell, the other no scent at all; the
flowers

flowers are like those of camomile, but larger; there is also a sort of may-weed found in various parts of the kingdom, which hath double flowers, almost as large as double camomile-flowers, which is called *cotula flore pleno*.

PLACE. The stinking may-weed groweth abundantly among corn, and will blister the hands of the reapers; that which stinketh not groweth also very plentifully, wild, in many places, and often amongst wild camomile.

TIME. They flower all the summer months, some earlier and some later.

GOVERNMENT AND VIRTUES. May-weed is governed by Mars, yet Galen saith the sopher of the Egyptians consecrated camomile to the sun, which is much of the same temperature, but the stinking may-weed is more hot and dry, and is used for the same purposes as camomile, viz. to dissolve tumours, expel wind, and to ease pains and aches in the joints and other parts; it is also good for women whose matrix is fallen down, or loosened from one side to the other, by washing their feet with a decoction thereof made in water. It is likewise good to be given to smell to by such as are troubled with the rising or suffocation of the matrix.

MAD-WORT.

PLACE. IT is often sown in gardens. The seed comes from Italy.

TIME. It flowers and flourishes in May; the seed is ripe in August.

QUALITIES AND VIRTUES. It is dry, digesting, and scouring. It healeth the bite of a mad dog, the morphew, sun-burning, &c. It also heals wounds inwardly and outwardly, cancers, and filthy ulcers; and digesteth clotted blood.

MANDRAKE.

THE mandrake is male and female.

PLACE. It grows in hot regions; woods, mountains, and gardens.

TIME. It springs in March, flowers in April; the fruit is ripe in August.

QUALITIES AND VIRTUES. It is of a cold nature. The root is phlegmatic, and may be eaten with pepper and hot spices. The apples are cold and moist; the bark of the root cold and dry, and the juice is good in all cooling ointments. The dried juice of the root, taken in a small quantity, purgeth phlegm and melancholy. In collyriums, it healeth pains of the eyes. In a pessary, it draweth forth the dead child and secundine. The green leaves, bruised with axungia and barley-meal, heal all hot swellings and inflammations; and, applied to the parts, consume hot ulcers and imposthumes. A suppository made of the juice, put into the fundament,

causeth sleep. Infused in wine, and drunk, it causeth sleep, and healeth pains; the apples smelt to, or the juice taken in a small quantity, also cause sleep. The seed and fruit do cleanse the womb; the leaves heal knots in the flesh, and the roots heal Saint Anthony's fire, &c. and, boiled with ivy, mollify the same. The oil of mandrakes is very cold; yet it may be anointed upon the temples and noses of those that have a phrenzy; if the patient sleep too long, dip a sponge in vinegar, and hold it to the nose. Also, it heals vehement pains of the head, and the tooth-ach, when applied to the cheeks and jaws, and causeth sleep.

M U S H R O O M.

DESCRIPTION. Mushrooms are plants more perfect than many people imagine. They have a regular root, a stalk consisting of several arrangements of fibres, the interstices of which are filled up with a parenchymatous substance, leading from the root to the head or umbel; the under-side of this umbel is full of lamellæ, or chives, every one of which is a regular pod, or seed-vessel. If these lamellæ are examined in their several states, the seeds in them may be easily discovered, and are always found to be of a size and degree of maturity proportioned to the state of the plant at the time. They have each of them also a filiquaceous aperture lengthwise, the seeds lying in rows ready to fall through it. The plant is easily and regularly propagated through these, and not only may be raised from seed, but, like many other plants, may be propagated by roots; several filaments at the root producing tubercles, in the manner of the potatoe, from each of which there will arise new roots and a new plant. The periods of vegetation in this plant are also sufficiently regular; and the common opinion, of its springing up in a night and perishing in a day, has no foundation in reality; for, in the common way of raising them on hot-beds, it is easy to find, that they often stand a fortnight or longer, from their first appearance, before they are fit for the table.

Mr. Bradley mentions an hundred kinds of mushrooms which he has seen in England, besides those very numerous small ones which constitute the mouldiness of liquors, fruits, &c. Mathiolus mentions mushrooms which weighed thirty pounds each, and were as yellow as gold. Fer. Imperatus tells us, he saw some which weighed above one hundred pounds apiece; and the Journal des Sçavans furnishes us with an account of some, growing on the frontiers of Hungary, which made a full cart-load.

The poison of mushrooms has been much talked of by several persons; but there seems to be no certain account of any body's having ever been injured by eating the common

common mushroom; though there are perhaps some kinds of them that are truly poisonous. The ancients have taken great pains to distinguish the several kinds of them, that the world might know the hurtful from the safe. The boletos, mentioned by Juvenal, on account of the death of Claudius, is sufficiently described by Pliny. Clusius, among the moderns, has described a vast number of different species, every where distinguishing the esculent and wholesome from the poisonous and pernicious kinds. The several authors who have treated of them since the time of Clusius, have all mentioned the effects of some or other of the poisonous kinds, and there are numerous instances of the mischief done by them at one time or other. The true eatable mushroom is distinguished from the poisonous and unpleasant kinds by these marks: When young, it appears of a roundish form, like a button, the stalk as well as the button being white, and the fleshy part very white when broken, the gills within being livid. As they grow larger, they expand their heads by degrees into a flat form, and the gills underneath are of a pale flesh colour; but, as they stand long, become blackish.

VIRTUES. The Laplanders have a method of using *funguses*, or toadstools, as we call them, (which are of the same genus with the mushroom,) to cure pains. They collect the largest *funguses* which they find on the bark of beech and other large trees, and dry them for use. Whenever they have pains in their limbs, they use some of this dry matter; pulling it to pieces with their fingers, they lay a small heap of it on the part nearest to where the pain is situated, and set it on fire. In burning away, it blisters up the part, and the water discharged thereby generally carries off the pain. It is a coarse and rough method, but generally a very successful one, especially when the patient has prudence enough to apply it in time, and resolution enough to bear the burning to a necessary degree.

NAILWORT, OR WHITLOW-GRASS.

DESCRIPTION. THIS very small and common herb hath no roots, save only a few strings; neither doth it ever grow to be above a hand's-breadth high; the leaves are very small, and something long, not much unlike those of chickweed, amongst which rise up many slender stalks, bearing numerous white flowers one above another, which are exceeding small; after which come small flat pouches containing the seed, which is also very small, but of a sharp taste.

PLACE. It grows commonly upon old stone and brick walls, and sometimes in dry gravelly grounds, especially if there be grass or moss near to shadow it.

TIME.

TIME. They flower very early in the year, sometimes in January and in February; before the end of April they are no longer to be found.

VIRTUES. It is held to be an exceeding good remedy for those imposthumes in the joints, and under the nails, which they call whitlows, felons, adicoms, and nail-wheals.

NEP, or CATMINT.

DESCRIPTION. COMMON garden nep shooteth forth hard four-square stalks with a hoariness on them, a yard high or more, full of branches, bearing at every joint two broad leaves, somewhat like balm, but longer pointed, softer, whiter, and more hoary, nicked about the edges, and of a strong sweet scent. The flowers grow in large tufts at the tops of the branches, and underneath them likewise on the stalks, many together, of a whitish purple colour. The roots are composed of many long strings or fibres, fastening themselves strongly in the ground, and retaining their leaves green all the winter.

PLACE. It is only nursed up in our gardens.

TIME. It flowereth in July, or thereabouts.

GOVERNMENT AND VIRTUES. It is an herb of Venus. Nep is generally used by women, being taken either inwardly or outwardly, either alone or with other convenient herbs, in a decoction to bathe them, or to sit over the hot fumes thereof, and by the frequent use thereof it taketh away barrenness, and the wind, and pains of the mother. It is also used for pains of the head arising from any cold cause, such as catarrhs, rheums, &c. and for swimming and giddiness thereof, and is of especial use for expelling wind from the stomach and belly. It is also effectual for the cramp or other pains occasioned by cold; and is found serviceable for colds, coughs, and shortness of breath. The juice thereof, drunk in wine, helps bruises. The green herb, bruised, and applied to the part for two or three hours, easeth the pain arising from the piles. The juice also, being made up into an ointment, is effectual for the same purpose. Washing the head with a decoction thereof taketh away scabs; and may be used to the like effect on other parts of the body.

NETTLES.

NETTLES are so well known that they need no description.

GOVERNMENT AND VIRTUES. This herb Mars claims dominion over. Nettle-tops, eaten in the spring, consume the phlegmatic superfluities in the body, which
the

the coldness and moisture of winter hath left behind. The roots or leaves boiled, or the juice of either of them, or both, made into an electuary with honey or sugar, is a safe and sure medicine to open the pipes and passages of the lungs, which is the cause of wheezing and shortness of breath, and helpeth to expectorate tough phlegm, as also to raise the imposthumated pleurisy, and evacuate it by spitting; the juice of nettles, used as a gargle, allayeth the swelling of the almonds of the throat; it also effectually settles the palate of the mouth in its place, and heals and tempers the soreness and inflammation of the mouth and throat. The decoction of the leaves in wine, being drunk, is very efficacious in most of the diseases peculiarly incident to the female sex; and is equally serviceable, when applied externally, mixed with myrrh. This decoction also, or the seed, provoketh urine, and has hardly ever been known to fail in expelling the gravel and stone from the reins and bladder; killeth worms in children; easeth the spleen occasioned by wind, and expelleth the wind from the body; though some think them only a provocative to venery. The juice of the leaves, taken two or three days together, stayeth bleeding at the mouth. The seed, being drunk, is a remedy against the sting of venomous creatures, the bite of a mad dog, the poisonous qualities of hemlock, henbane, nightshade, mandrake, or other such like herbs, that stupify and dull the senses; as also the lethargy, especially if used outwardly, by rubbing the forehead and temples in lethargic cases, and the places bitten or stung by beasts, with a little salt: The distilled water of the herb is also effectual (although not so powerful) for the diseases aforesaid, and for outward wounds and sores, to wash them, and to cleanse the skin from morpew, leprosy, and other discolourings thereof. The seed, or leaves, bruised, and put into the nostrils, stayeth the bleeding thereof, and taketh away the flesh growing in them, called *polipus*. The juice of the leaves, or the decoction of them, or of the roots, is very good to wash either old, rotten, or stinking, sores; fistulas, and gangrenes, and such as are fretting, eating, and corroding; scabs, manginess, and itch, in any part of the body; as also green wounds, by washing them therewith, or applying the green herb, bruised thereunto, even although the flesh should be separated from the bones. The same, on being applied to the limbs, when wearied, refresheth them, and strengtheneth, drieth, and comforteth, such places as have been put out of joint, after having been set again; as also such parts of the human body as are subject to the gout or other aches, greatly easing the pain thereof; and the defluxion of humours upon the joints or sinews it also relieveth, by drying up or dispersing the defluxions. An ointment made of the juice, oil, and a little wax, is exceedingly good to rub cold and benumbed members. An handful of green nettles, and another of wall-wort, or Dane-wort, bruised and applied

simply of themselves, to the gout, sciatica, or joint-achs, in any part, hath been found to be an admirable help in complaints of that nature.

NIGHTSHADE.

DESCRIPTION. COMMON nightshade hath an upright, round, green, hollow, stalk, about a foot or half a yard high, shooting forth into many branches, whereon grow numerous green leaves, somewhat broad and pointed at the ends, soft and full of juice, somewhat like unto basil, but larger, and a little unevenly dented about the edges; at the tops of the stalks and branches, come forth three or more white flowers composed of five small pointed leaves apiece, standing on a stalk together one above another, with yellow pointels in the middle, composed of four or five yellow threads set together, which afterwards turn into so many pendulous green berries of the bulk of small peas, full of green juice, and small whitish round flat seed lying within it. The root is white, and a little woody when it hath given flowers and fruit, with many small fibres at it. The whole plant is of a watery insipid taste; but the juice within the berries is somewhat viscous, and of a cooling and binding quality.

PLACE. It groweth wild in this kingdom, and in rubbish, the common paths and sides of hedges, in fields; and also in gardens, without any planting.

TIME. It dieth annually, and riseth again of its own sowing; but springeth not until the latter end of April at the soonest.

GOVERNMENT AND VIRTUES. It is a cold saturnine plant. The common nightshade is wholly used to cool hot inflammations, either inwardly or outwardly, being no ways dangerous, as the other nightshades are; yet it must be used moderately; the distilled water only of the whole herb is fittest and safest to be taken inwardly; the juice, being clarified and mixed with a little vinegar, is very good to wash the mouth and throat, when inflamed. Outwardly, the juice of the herb or berries with a little vinegar and ceruse, pounded together in a leaden mortar, is very good to anoint all hot inflammations in the eyes; it is also very good for the shingles, ringworms, and in all running, fretting, and corroding, ulcers; and in moist fistulas, if the juice be mixed with hen's-dung and applied thereunto. A cloth, wet in the juice, and applied to the testicles, when swelled, giveth much ease, as also to the gout which ariseth from hot and sharp humours. The juice dropped into the ears easeth pains thereof, arising from heat or inflammation. Pliny saith, it is good for hot swellings under the throat. Care must be taken that the deadly nightshade is not mistaken for this.

DEADLY

DEADLY NIGHTSHADE.

DESCRIPTION. THE flower is bell-shaped ; it hath a permanent empalement of one leaf, cut into five parts ; it hath five stamina rising from the base of the petal ; in the centre is situated an oval germen, which becomes a globular berry, having two cells sitting on the empalement, and filled with kidney-shaped seeds. It is of a cold nature ; in some it causeth sleep ; in others madness, and, shortly after, death.

This plant should not be suffered to grow in any places where children resort, for it is a strong poison ; several instances having happened where children have been killed by eating the berries.

There is a remarkable instance of the direful effects of this plant recorded in Buchanan's History of Scotland ; wherein he gives an account of the destruction of the army of Sweno, when he invaded Scotland, by mixing a quantity of the juice of these berries in the drink which the Scots, by the truce, were to supply them with ; this so intoxicated the Danes, that the Scots fell upon them in their sleep, and killed the greatest part of them ; so that there were scarcely men enough left to carry off their king.

WOODY NIGHTSHADE.

CALLED also *bitter sweet*, *dulcamara*, and *amara dulcis*.

PLACE. It grows by the sides of hedges, and in moist ditches, climbing upon the bushes ; with winding, woody, but brittle, stalks.

TIME. It is perennial, and flowers in June and July.

VIRTUES. The roots and stalks, on first chewing them, yield a considerable bitterness, which is soon followed by an almost honey-like sweetness ; and they have been recommended in different disorders, as high resolvents and deobstruents. Their sensible operation is by sweat, urine, and stool ; the dose from four to six ounces of a tincture made by digesting four to six ounces of the twigs in a quart of white wine.

NAVEL-WORT, OR PENNY-WORT.

NAMES AND KINDS. IT is called *umbilicus veneris* and *herba coxendicum*. There are seven different kinds.

DESCRIPTION AND VIRTUES. 1. The small navel-wort is moist and somewhat cold and binding. It cooleth and repelleth, scoureth and consumeth.

2. The water penny-wort is hot and ulcerating, like crows-foot; and is very dangerous to cattle who may occasionally feed thereon.

3. The bastard Italian navel-wort partakes of the true in cold and moisture.

4. The juice of the wall penny-wort healeth all inflammations and hot tumours, as the erysipelas, or St. Anthony's fire; it healeth kided heels, being batheth therewith and the leaves applied. The leaves and root break the stone, provoke urine, and cure the dropsy. The distilled water healeth sore kidneys, pains of the bowels, piles, gout, and king's evil.

5. The common or one-summer's navel-wort is diuretic, not very hot, but exceeding dry. It provoketh urine, and digesteth sliminess in the joints. Two drachms drunk in wine will expel much urine from dropsical persons; and, applied, will also ease the gout.

6, 7. The spotted and small red-flowered navel-wort are cold and moist, like house-leek.

PLACE. The first sort groweth on stone walls; the other sorts are only found on the Alps.

TIME. They flower in the beginning of the spring, but flourish all the winter.

NIPPLEWORT.

NAMES AND KINDS. OF this there are three kinds: 1. The ordinary nipplewort, called in Latin *lampsana vulgaris*. 2. The nipplewort of Austria, called *lampsana papillaris*. 3. Wild or wood bastard-nipplewort, *foncho affinis lampsana sylvatica*. And in Prussia, as saith Camerarius, they call it *papillaris*.

DESCRIPTION. 1. The ordinary nipplewort groweth with many hard upright stalks, whereon grow dark-green leaves from the bottom to the top; but the higher the smaller; in some places without any dents in the edges, and in others with a few uneven jags therein, somewhat like a kind of hankweed; the tops of the stalks have some small long branches, which bear many small star-like yellowish flowers on them, which turn into small seed; the root is small and fibrous; the plant yieldeth a bitter milk like that of the sow-thistle.

2. The Austrian nipplewort hath slender, smooth, and solid, stalks, not easily broken, about two feet high, whereon stand, without order, somewhat long and narrow leaves, broadest in the middle, and sharp at the ends, waved a little about the edges, and compassing them at the bottom, yielding a little milk; from the upper joints, with the leaves, grow forth small firm branches, yet a little bending, bearing each of them four or five long green husks, and in them small purplish
flowers

flowers of five leaves each, notched in at the broad ends, with some small threads in the middle; which turn into down, and are blown away with the wind: the root is small and shreddy, and lasteth many years.

3. The wild or wood bastard-nipplewort is like unto the first sort, but with somewhat broader leaves, and greater store of branches: but in the flowers, and other parts, not much different.

PLACE AND TIME. The first groweth common, almost every where, upon the banks of ditches and borders of fields; the second, Clusius saith he found in Hungary and Saxony, and other places; the last is found near the sides of woods, and hedge-rows; they flower in summer, and the seed is ripe soon after.

GOVERNMENT AND VIRTUES. These are plants of Venus, and kindly endued with a peculiar faculty for the healing of sore nipples of women's breasts; for which reason Camerarius saith that in Prussia they call it *papillaris*, because of its excellent virtues in healing women's sore breasts, as well as their nipples, when they are ulcerated; it having a singular healing quality therein; and is temperate in heat and driness, with some tenuity of parts able to digest the virulency of sharp humours which break out into those parts.

THE NUTMEG-TREE, AND MACE.

NAMES AND DESCRIPTION. THE fruit of this tree is called in Latin *nux mystica*, and in shops *nux moscata*. The tree groweth very tall, like our pear-trees; having leaves always green, somewhat resembling the leaves of the orange-tree; the fruit groweth like our walnuts, having an outer thick husk; which, when it grows ripe openeth itself as the shell of the walnut doth; shewing the nut within covered with the mace, which is of an orient crimson colour while it is fresh, but the air changeth the colour to be more dead and yellowish.

GOVERNMENT AND VIRTUES. The nutmegs and maces are both solar, of temperature hot and dry in the second degree, and somewhat astringent, and are good to stay the lask; they are effectual in all cold griefs of the head or brain, for palsies, shrinking of sinews, and diseases of the mother; they cause a sweet breath, and disperse wind in the stomach or bowels, quicken the sight and comfort the spirits, provoke urine, increase sperm, and are comfortable to the stomach; they help to procure rest and sleep, being laid to the temples, by allaying the distemper of the spirits.

The way to use it to procure rest is, to take two pieces of red rose-cake and warm them in vinegar over a chafing-dish of coals, then scrape nutmeg upon the cakes, and bind it warm to the temples.

The mace is of the same property, but somewhat more warming and comforting than the nutmeg; the thick oil that is drawn from both nutmegs and mace is good in pectoral complaints, to warm a cold stomach, help the cough, and to dry up distillations of rheum falling upon the lungs.

THE OAK

IS so well known (the timber thereof being the glory and safety of the British nation) that it needeth no description.

GOVERNMENT AND VIRTUES. Jupiter owns the tree. The leaves and bark of the oak, and the acorn cups, do bind and dry very much; the inner bark of the tree, and the thin skin that covereth the acorn, are most used to stay the spitting of blood, and the bloody flux; the decoction of the bark, and the powder of the cups, stay vomiting, spitting of blood, bleeding at the mouth, or other fluxes of blood in men or women: lasks also, and the involuntary flux of natural seed. The acorns in powder taken in wine provoke urine, and resist the poison of venomous creatures. The decoction of acorns and the bark made in milk, and taken, resisteth the force of poisonous herbs and medicines, as also the virulency of cantharides, when any person, by eating them, hath the bladder exulcerated, and evacuateth blood. Hippocrates saith, he used the fumes of oak-leaves to women that were troubled with the strangling of the mother; and Galen applied them, being bruised, to cure green wounds. The distilled water of the oaken buds, before they break out into leaves, is good to be used either inwardly or outwardly to assuage inflammations, and stop all manner of fluxes in man or woman; it is also singularly good in pestilential and hot burning fevers, as it resisteth the force of the infection, and allayeth the heat; it cooleth the heat of the liver, breaketh the stone in the kidneys, and stayeth women's courses. The decoction of the leaves hath the same effects. The water that is found in the hollow places of old oaks, is very effectual against any foul or spreading scab. The distilled water or decoction (which last is preferable) of the leaves, is one of the best remedies known for the fluor albus.

O A T S.

THIS grain is well known: *avena* is the Latin name; they are grown in every quarter of the globe where agriculture is carried on. They are sown in spring, and mown or reaped in September and October; but in the northern parts of this kingdom it is frequently much later before they are cut down.

NATURE AND VIRTUES. They are somewhat cold and drying, and are more used for food, both for man and beast, than for physic; yet, being quilted in a bag with bay salt, made hot in a frying-pan, and applied as warm as can be endured, they ease pains and stitches in the side, and the cholic in the belly. A poultice made of the meal of oats and oil of bays, helpeth the itch, leprosy, and fistulas, and discusseth hard imposthumes. Oatmeal boiled in vinegar, and applied, takes away spots and freckles in the face or other parts of the body. It is also used in broth or milk, to bind those who have a lask, or other flux; and with sugar it is good for them that have a cough or cold. Raw oatmeal is an unwholesome diet.

ONE-BLADE.

DESCRIPTION. **THIS** small plant never beareth more than one leaf, except only when it riseth up with its stalk, in which case it beareth another, but seldom more, which are of a bluish green colour, pointed, with many ribs or veins therein, like plantain; at the top of the stalk grow many small white flowers, in the form of a star, smelling somewhat sweet; after which come small berries, of a reddish colour when they are ripe. The root is small, of the bigness of a rush, lying and creeping under the upper crust of the earth, shooting forth in divers places.

PLACE It groweth in moist, shadowy, and grassy, places of woods, in most parts of the kingdom.

TIME. It flowereth about May; the berries are ripe in June; it then quickly perisheth until the next year, when it springeth afresh from the old root.

GOVERNMENT AND VIRTUES. It is a precious herb of the sun. Half a drachm, or at most a drachm, in powder of the roots, taken in wine and vinegar, of each equal parts, and the party laid directly down to sweat thereupon, is held to be a sovereign remedy for those that are infected with the plague, and have a sore upon them, by expelling the poison and infection, and defending the heart and spirits from danger. It is an exceeding good wound-herb, and is therefore used with others of the like nature, in making compound balms for curing wounds, either whether they are fresh and green, or old and malignant, and especially if the sinews have been burnt.

Pena and Lobel severally made experiments of the quality of this plant, upon two dogs, and found it was not dangerous, but effectual to expel the deadly operation of corrosive sublimate and arsenic.

O R C H I S.

IT hath a great variety of names, though most generally known by this.

DESCRIPTION. To enumerate all the different sorts of it is needless; a description of the roots will be sufficient, which are to be used with some discretion. They have each of them a double root within, some of them round, others like a hand; these roots alter every year alternately; when the one riseth and waxeth full, the other groweth lank and perisheth; now it is those which are full-grown that are to be used in medicine, the other being either of no use at all, or else, according to some, thwarting the operation of the full-grown root, and undoing what otherwise it might have effected.

TIME. One or other of them may be found in flower from the beginning of April to the latter end of August.

GOVERNMENT AND VIRTUES. They are hot and moist in operation; under the dominion of Venus, and provoke lust exceedingly; which, it is said, the dry and withered roots restrain again; they are held to kill worms in children; also, being bruised and applied to the place, to help the king's evil.

O N I O N S.

THEY are so well known that their description is unnecessary.

GOVERNMENT AND VIRTUES. Mars owns them. They possess the quality of drawing corruption to them, for, if you peel one and lay it upon a dunghill, you will find it rotten in half a day, by drawing putrefaction to it; it is therefore natural to suppose they would have the same attractive power if applied to a plague-fore.

Onions are flatulent, or windy, yet do they whet the appetite, increase thirst, and ease the belly and bowels; provoke the menses; help the bite of a mad dog, and other venomous creatures, when used with honey and rue, and increase sperm; especially the seed of them; they also kill the worms in children, if they drink the water fasting wherein they have been steeped all night. Being roasted under the embers, and eaten with honey, or sugar and oil, they conduce much to help an inveterate cough, and expectorate the tough phlegm. The juice, being snuffed up into the nostrils, purgeth the head, and helpeth the lethargy; yet the eating them too frequently occasions the head-ach. The eating of onions, fasting, with bread and salt, is held to be a good preservative against infection. If a great onion is made

hollow, filling the place with good treacle, afterwards roasting it on the embers, then throwing away the outward skin, and beating the remainder well together, is accounted a sovereign remedy for either the plague-fore or any other putrid ulcer. The juice of onions is reckoned good for scalds or burns, occasioned either by fire, boiling water, or gunpowder; and, used with vinegar, taketh away all blemishes, spots, and marks, in the skin; and, dropped into the ears, easeth the pain and noise thereof. If applied, beaten together with figs, they help to ripen, and cause supuration in, imposthumes.

Onions, if bruised, and mixed with salt and honey, will effectually destroy warts, causing them to come out by the roots.

Leeks participate of nearly the same quality as onions, though not in so great a degree. They are said to be an antidote against a surfeit occasioned by the eating of mushrooms, being first baked under the embers, and then taken when sufficiently cool to be eaten; being boiled, and applied warm, they help the piles.

O R P I N E.

DESCRIPTION. COMMON orpine riseth up with divers round brittle stalks thick set with fat and fleshy leaves, without any order, and very little dented about the edges, of a pale green colour; the flowers are white, or whitish, growing in tufts, after which come small chaff-like husks, with seed-like dust in them. The roots are various in their shape and size, and the plant does not grow so large in some places as in others.

It is to be found in almost every part of this kingdom, most commonly in gardens, where it groweth to a larger size than that which is wild; it is also to be found in the shadowy sides of fields and woods.

TIME. It flowereth about July, and the seed is ripe in August.

GOVERNMENT AND VIRTUES. The moon owns this herb. Orpine is seldom used in inward medicines with us, although Trague saith, from experience in Germany, that the distilled water thereof is profitable for gnawings or excoriations in the stomach and bowels, and for ulcers in the lungs, liver, or other inward parts; as also in the matrix; being drunk for several days successively, it helpeth all those diseases; he also says it stayeth the sharpness of the humours in the bloody flux, and other fluxes of the body, or in wounds; the root thereof hath also the same effect. It is used outwardly to cool any heat or inflammation upon any hurt or wound, and easeth the pains of them; as also to heal scalds or burns. The juice thereof beaten with

some fallad oil, and therewith anointing the parts, or the leaf bruised and laid to any green wounds in the hands and legs, doth quickly heal them; and, being bound to the throat, much helpeth the quinsy; it is likewise found servicable in ruptures.

The juice thereof, made into a syrup with honey or sugar, may be safely taken, a spoonful or two at a time, and with good effect, for a quinsy; and will be found more speedy in operation, as well as pleasant in taste, than some other medicines prescribed for that disorder.

THE OLIVE-TREE.

KINDS AND NAMES. OF these there are the tame and manured olive, and the wild olive-tree; the first is called in Latin *olea sativa*, and the wild kind *oleaster*, *five olea sylvestris*.

DESCRIPTION. 1. It has a small tubulous impalement of one leaf, cut into four segments at the top; the former consists of one petal, which is tubulous, cut at the brim into four segments; it has two short stamina, terminated by erect summits, and a roundish germen, supporting a short single style, crowned by a thick bifid stigma; the germen afterwards turns to an oval smooth fruit, or berry, with one cell, inclosing an oblong oval nut. In Languedoc and Provence, where the olive-tree is greatly cultivated, they propagate it by truncheons split from the roots of the trees; for, as these trees are frequently hurt by hard frosts in winter, so, when the tops are killed, they send up several stalks from the root; and, when these are grown pretty strong, they separate them with an axe from the root; in the doing of which they are careful to preserve a few roots to the truncheons; these are cut off in the spring after the danger of the frost is over, and planted about two feet deep in the ground. These trees will grow in almost any soil; but, when planted in rich moist ground, they grow larger, and make a finer appearance, than in poor land; but the fruit is of less esteem, because the oil made from it is not so good as that which is produced in a leaner soil; chalky ground is esteemed best for them; and the oil, made from the trees growing in that sort of land, is much finer, and will keep longer, than the other. In England, the plants are only preserved by way of curiosity, and are placed in winter in the green-house for variety.

2. *Oleaster*, the wild olive-tree, groweth somewhat like unto the manured, but it hath harder and smaller leaves, and thicker set on the branches, with sundry sharp thorns among the leaves; the blossoms and fruit come forth in the same manner as the other do, and in as great plenty, but much smaller, and scarce coming at any
time

time to ripeness where they naturally grow ; but, where they do become ripe, they are small, with crooked points, and black. Of the olives hereof oil is sometimes made, which is colder and more astringent than the other, and harsher in taste and greenish in colour ; but the olives are much respected, and gathered to be eaten.

PLACE AND TIME. Both kinds of olives grow in the hot countries only ; in any cold climate, they will never bear fruit, nor hardly endure a winter ; the manured is planted where it groweth, and, according to the nature of the soil or climate, produceth larger or smaller olives, and in more or less plenty ; and oil sweeter or more strong in taste. The finest and sweetest oil comes from the isles in the Mediterranean sea, as Zante, Cerigo, &c. that from Majorca, &c. is more full and fat ; the oil from Provence, in France, is stronger and hotter tasted. The wild olives grow naturally in Spain, Portugal, Italy, and many other countries. They flower in June and July, but their fruit is not ripe until November or December.

GOVERNMENT AND VIRTUES. The olive-tree is a plant of Venus, and of gentle temperature. The green leaves and branches of the olive-tree, but much more of the wild olive, do cool and bind ; and the juice thereof, mixed with vinegar, is peculiarly serviceable in all hot imposthumes, inflammations, swellings, St. Anthony's fire, fretting or creeping ulcers, and cankers in the flesh or mouth. The same also stayeth the bleeding of wounds, being applied to the place ; the said juice being dropped into the eyes stayeth the distillation of hot rheums into them, and cleareth the sight from films or clouds that offend the light, or any ulcer that doth breed therein, or ulcers in the ears.

Pickled olives do stir up an appetite to meat, and, although they be hard of digestion, yet are pleasing to the stomach, being apt to putrefy therein ; they are not good for the eye-sight, and cause the head-ach ; if they be dried, and applied to fretting and corroding ulcers, they stop their progress, and heal them ; and take away the scars of carbuncles, or plague-fores. The pickled olives burned, beaten, and applied unto wheals, stop their further increase, and hinder them from rising ; they cleanse foul ulcers, help gums that are spongy, and fasten loose teeth.

The water, that is taken from the green wood when heated in the fire, healeth the scurf or scab in the head, or other parts ; the olive-stones, being burned, are used for the same purposes, and also to heal foul spreading ulcers ; and, being mixed with fat and meal, they take away the ruggedness of the nails.

The other properties of the olive are contained in the oil, and the foot or bottom of the tree. First, the oil has divers and variable virtues, according to the ripeness or unripeness of the fruit whereof it is made, and then of the time and age thereof,
and

and of the washing it from the salt wherewith some of it is made. The oil that is made of unripe olives is more cooling and binding than that which is made of those that are ripe; which, when it is fresh and new, is moderately heating and moistening: but, if it be old, it hath a stronger force to warm and discuss, which properties are perceivable by its sweetness; for, if the oil be harsh, it is more cooling than warming; and, if that oil be washed, it taketh from it all harshness.

The green oil of unripe olives, while it is fresh, is most welcome to the stomach; it strengtheneth the gums, and fasteneth the teeth, if it be held in the mouth for any time; and, being drunk, it preventeth too great a perspiration in those who are subject thereunto. The sweet oil is of most use in fallads, &c. being most pleasing to the stomach and taste; but the older the oil is, the better it is for medicine, both to warm any part, and discuss any thing where needful; and to open and move the belly downwards; and is most effectual against all poisons, especially those that exulcerate the intestines, or, not having passed down so low, irritate the stomach; the oil either bringing it up by vomiting, or at least hindering its malignity from spreading. It is also a principal ingredient in almost all salves, helping as well the form as the virtue thereof.

The foot, or dregs of the oil, the older it is, is the better for various purposes, as to heal the scab in man or beast, being used with the decoction of lupines. It is very profitably used for ulcers of the fundament or privy parts, when mixed with honey, wine, and vinegar; it healeth wounds, and helpeth the tooth-ach being held in the mouth; if it be boiled in a copper vessel to the thickness of honey, it bindeth much and is effectual for all the purposes for which lycinus may be used; if it be boiled with the juice of unripe grapes to the thickness of honey, and applied to the teeth, it will cause them to fall out.

THE ORANGE-TREE.

KINDS AND NAMES. Of oranges we shall describe five kinds or sorts. These apples were called by the ancients *mala aurea Hesperidum*, the golden apples of Hesperides; and therefore Hercules made it one of his labours to kill the dragon that kept the garden where they were, and to bring them away with him. The flowers of the orange-tree are called *napha*; and the ointment that is made of them *unguentum ex napha*. Oranges are now generally called *aurantia*.

DESCRIPTION. I. The ordinary orange-tree, *mala aurantia vulgaris*, groweth often to a very great height and thickness, with large spreading arms and branches,
with

with a rougher bark below, and green on the branches; yet is it smaller in less fruitful soils; sparingly armed with sharp but short thorns; the leaves are somewhat similar to those of the lemon, but that each leaf hath a piece of a leaf set under it, are not dented at all about the edges, and are full of small holes in them; the flowers are whitish, and of a strong sweet scent; the fruit thereof is round, with a thick bitter rind, of a deep yellowish-red colour, which from it taketh the name of an orange colour, having a soft, thin, white loose substance next unto the outer coloured rind; and a four juice lying mixed amongst small skins in several parts, with seed between them in partitions; the juice of some is less sour than others, and of a taste between four and sweet, nearly like wine.

2. The wild or crab orange-tree, *malus aurantia sylvestris*. This tree groweth wild as our crab-trees do, and is fuller of branches and thicker set with thorns than the former.

3. The apple orange, called in Latin *malus aurantia, cortice dulci eduli*. The Spaniards call this orange *naranja caxel*. This differeth from others not so much in the colour of the outer bark, which is of a deep gold yellowish-red, but in the whole fruit, which is throughout almost as firm as an apricot, and yet distinguished into parts, in the inside, like others; which, together with the bark and rind, is to be eaten like an apple; the rind not being rough and bitter as the others.

4. The orange without seeds, *malus aurantia, unico grano*. This only differeth from that orange which has the best four juice, in having but one grain or seed in the whole juice lying within it.

5. The dwarf orange-tree, *malus aurantia pumilio*. The stock of this dwarf-tree is low, and the branches grow thick, well stored with leaves, but they are smaller and narrower than the other; the flowers also are many, and thick set on the branches, which bear fruit more plentifully than the former, though of a smaller size, yet equally well-coloured.

PLACE AND TIME. All these sorts of oranges, as well as the lemons and citrons, are brought unto us from Spain and Portugal; they hold time with the lemons, having their leaves always green, with green blossoms and ripe fruit constantly together.

GOVERNMENT AND VIRTUES. All these trees and fruits are governed by Jupiter. The fruit is of different parts and qualities; the rind of the oranges is more bitter and hot than those of the lemons or citrons, and are therefore preferable to warm a cold stomach, breaking the wind and cutting the phlegm therein; after the bitterness is taken from them, by steeping them in water for sundry days, and then pre-

served either wet or dry, beside their use in banquets, they are very effectual for strengthening the heart and spirits. Though the juice is inferior to those of the citron and lemon, and fitter for meat than medicine, yet four or five ounces of the juice taken at a time, in wine or ale, will drive forth putrid humours from the inward parts by sweat, and strengthen and comfort the heart. The distilled water of the flowers, besides the odoriferous scent it hath as a perfume, is good against contagious diseases and pestilential fevers; by drinking thereof at sundry times, it helpeth also the moist and cold infirmities of the womb; the ointment that is made of the flowers is good to anoint the stomach, to help the cough, and expectorate cold raw phlegm; and to warm and comfort the other parts of the body.

P A R S L E Y.

THIS is so well known that it needs no description.

GOVERNMENT AND VIRTUES. It is under the dominion of Mercury, and is very comfortable to the stomach; it helpeth to provoke urine, women's courses, and to break wind both in the stomach and bowels; it a little openeth the body, but the root possesseth this last virtue in a greater degree, opening obstructions both of the liver and spleen; and is therefore accounted one of the five opening roots; Galen commendeth it against the falling sickness, and says it mightily provokes urine, if boiled and eaten like parsnips. The seed is also effectual to provoke urine and women's courses, expel wind, break the stone, and ease the pains and torments thereof, or of any other part of the body, occasioned by wind. It is also effectual against the venom of any poisonous creature, and the dangerous consequences which arise from the taking of litharge; and is good against a cough. The distilled water of parsley is a familiar medicine with nurses to give to children when they are troubled with wind in the stomach or belly, which they call the frets; it is also greatly useful to grown persons. The leaves of parsley, when used with bread or meal, and laid to the eyes that are inflamed with heat, or swollen, doth greatly relieve them; and, being fried with butter, and applied to women's breasts that are hard through the curdling of the milk, it quickly abateth the hardness; it also taketh away black and blue marks arising from bruises or falls. The juice, dropped into the ears with a little wine, easeth the pains thereof: Tragus recommends the following, as an excellent medicine to help the jaundice and falling sickness, the dropsy, and stone in the kidneys, viz. Take of the seeds of parsley, fennel, anise, and carraways, of each an ounce; of the roots of parsley, burnet, saxifrage, and carraways, of each one ounce and an half; let the seeds be bruised, and the roots washed and cut small;

let

let them lie all night in steep in a pottle of white wine, and in the morning be boiled in a close earthen vessel until a third part or more be waisted, which being strained and cleared, take four ounces thereof morning and evening, first and last, abstaining from drink after it for three hours. This openeth obstructions of the liver and spleen, and expelleth the dropfy and jaundice by urine.

PARSLEY-PIERT, or PARSLEY-BREAKSTONE.

DESCRIPTION. THE root, although it be small and thready, yet it continues many years, from whence arise many leaves lying along upon the ground, each standing upon a long small footstalk, the leaves as broad as a man's nail; very deeply indented on the edges, somewhat like a parsley leaf, but of a very dusky green colour. The stalks are very weak and slender, about three or four fingers in length, set so full of leaves that they can hardly be seen, either having no footstalk at all, or but very short. The flowers are so small they can hardly be seen, and the seed is scarcely perceptible at all.

PLACE. It is common through all parts of the kingdom, and is generally to be met with in barren, sandy, and moist, places. It may be found plentifully about Hampstead-heath, in Hyde-park, and in other places near London.

TIME. It may be found all the summer through, from the beginning of April to the end of October.

GOVERNMENT AND VIRTUES. Its operation is very prevalent to provoke urine and to break the stone. It is a very good fallad herb, and would pickle for winter use as well as samphire. It is a very wholesome herb. A dram of the powder of it, taken in white wine, brings away gravel from the kidneys insensibly, and without pain. It also helps the stranguary.

P A R S N I P.

THE garden kind thereof is so well known (the root being commonly eaten) that to particularize it is totally unnecessary; but, the wild kind being of more physical use, the following is its

DESCRIPTION. The wild parsnip differeth little from that of the garden, but does not grow so fair or large, nor has it so many leaves; the root is shorter, more woody, and not so fit to be eaten; therefore the more medicinal.

PLACE. The name of the first sheweth the place of its growth.

The other groweth wild in divers places, as in the marshes by Rochester, and elsewhere, and flowereth in July; the seed being ripe about the beginning of August the second year after the sowing; seldom flowering the first year.

GOVERNMENT AND VIRTUES. The garden parsnip is under Venus. It is exceeding good and wholesome nourishment, though rather windy; it is said to provoke venery, notwithstanding which it tatteneth the body much, if frequently used. It is also serviceable to the stomach and reins, and provoketh urine. But the wild parsnip hath a cutting, attenuating, cleansing, and opening, quality therein. It resisteth and helpeth the bitings of serpents, easeth pains and stiches in the sides, and dissolveth wind both in the stomach and bowels; it also provoketh urine. The root is often used, but the seed much more.

The wild parsnip being preferable to that of the garden, shews nature to be the best physician.

C O W - P A R S N I P.

DESCRIPTION. THIS groweth with three or four large, spread, winged, rough, leaves, lying often on the ground, or else raised a little from it, with long, round, hairy, footstalks under them, parted usually into five divisions, the two couples standing against each other, and one at the end, and each leaf being almost round, yet somewhat deeply cut in on the edges in some leaves, and not so deep in others, of a whitish green colour, smelling somewhat strongly; among which ariseth up a round crested hairy stalk, two or three feet high, with a few joints and leaves thereon, and branched at the top, where stand large umbels of white, and sometimes reddish, flowers, and, after them, flat, whitish, thin, winged seed, two always joined together. The root is long and white, with two or three long strings growing down into the ground, smelling likewise strong and unpleasant.

PLACE. It groweth in moist meadows, the borders and corners of fields, and near ditches, generally throughout the kingdom.

TIME. It flowereth in July, and seeds in August.

GOVERNMENT AND VIRTUES. Mercury hath the dominion over them. The seed thereof, as Galen saith, is of a sharp and cutting quality, and is therefore a fit medicine for the cough and shortness of breath, the falling sickness, and the jaundice. The root is available to all the purposes aforesaid, and is also of great use to take away the hard skin that groweth on a fistula, by scraping it upon the part. The seed hereof, being drunk, cleanseth the belly from tough phlegmatic matter;

it

it easeth those that are liver-grown, and passions of the mother, either being drunk or the smoke thereof inhaled by fumigation; it raiseth such as have fallen into a deep sleep, or lethargy, by burning it under their nose. The seed and root, being boiled in oil, and the head rubbed therewith, help not only those labouring under a phrenzy, but also the lethargy or drowsy evil, and those that have been long troubled, when mixed with rue. It also helpeth the running scab and the shingles. The juice of the flowers, dropped into the ears that run and are full of matter, cleanseth and healeth them.

PEACH-TREE.

DESCRIPTION. THE peach-tree does not grow so large as the apricot-tree, yet hath it tolerably wide-spreading branches, from whence spring smaller reddish twigs, whereon are set long and narrow green leaves, dented about the edges. The blossoms are larger than the plumb, and of a light purple colour. The fruit is round, and sometimes as big as a middle-sized pippin; others are smaller, and differing in colour and taste, as russet, red, or yellow, watery, or firm, with a frieze or cotton all over, a cleft therein like an apricot, and a rugged furrowed great stone within it, which contains a bitter kernel. It sooner waxeth old and decayeth than the apricot-tree.

PLACE. They are nursed up in gardens and orchards.

TIME. They flower in the spring, and fructify in autumn.

GOVERNMENT AND VIRTUES. Venus owns this tree, and by it opposeth the ill effects of Mars. Nothing is better to purge choler and the jaundice in children and young people, than the leaves of this tree made into a syrup or conserve, of which two spoonfuls at a time may safely be taken. The leaves of peaches, bruised and laid on the belly, kill worms; and so they do also, if boiled in ale and drunk; they likewise open the belly; and, being dried, are a safe medicine to discuss humours. The powder of them, strewed upon fresh bleeding wounds, stayeth their bleeding, and closeth them up. The flowers, steeped all night in a little warm wine, strained forth in the morning, and drunk fasting, do gently open the belly. A syrup made of them, as the syrup of roses is made, operates more forcibly than that of roses, as it provoketh vomiting, and discusseth watery and hydropic humours by the continuance thereof. The flowers made into a conserve produce the same effect. The liquor, which drops from the tree on its being wounded, is given in the decoction of coltsfoot to those that are troubled with the cough or shortness of

breath; by adding thereto some sweet wine, and putting also some saffron therein, it is good for those that are hoarse, or have lost their voice; it helpeth all defects of the lungs, and those that vomit or spit blood. Two drachms thereof given in the juice of lemons, or of radishes, are good for those that are troubled with the stone. The kernels of the stones do wonderfully ease the pains and wringings of the belly, occasioned by wind or sharp humours; and make an excellent medicine for the stone, when done up in the following manner: take fifty kernels of peach-stones, and one hundred of the kernels of cherry-stones, a handful of elder-flowers, fresh or dried, and three pints of muscadell; set them in a close pot into a bed of horse-dung for ten days; after which distil it in a glass, with a gentle fire, and keep it for use; three or four ounces of it may be drunk at a time. The milk or cream of these kernels being drawn forth with some vervain-water, and applied to the forehead and temples, procures rest and sleep to sick persons who cannot otherwise get it. By rubbing the temples with the oil drawn from the kernels the same effect is produced. The said oil, put into clysters, or anointing the lower part of the belly, easeth the pain of the windy cholic, and, when dropped into the ears, relieveth pain in them; the juice of the leaves hath the like virtue; and, by rubbing the forehead and temples, it helpeth the megrim and all other pains in the head. If the kernels be bruised and boiled in vinegar, until they become thick, and applied to the head, it causeth the hair to grow upon bald places, or where it is too thin.

P E A R - T R E E.

PEAR-TREES are so well known that they need no description.

GOVERNMENT AND VIRTUES. This tree belongs to Venus, as well as the apple-tree. For their physical use, they are best discerned by their tastes. All the sweet or luscious sorts, whether manured or wild, tend to open the belly more or less; those, on the contrary, that are sour and harsh, have an astringent quality; the leaves of each possess the same contrariety of properties. Those that are moist are, in some degree, of a cooling nature; but the harsh or wild sorts are much more so, and are frequently used as repelling medicines; if the wild sort be boiled with mushrooms, it maketh them the less dangerous. The said pears, boiled with a little honey, help much the oppression of the stomach, as indeed all sorts of them do more or less; but the harsher kinds are most cooling and binding. They are very useful to bind up green wounds, stopping the blood and healing the wound without further trouble or inflammation, as Galen saith he hath found by experience.

Wild pears sooner close up the lips of green wounds than the others.

Schola Salerni adviseth to drink much wine after eating of pears, otherwise (it is said) they are as bad as poison; but, if a poor man find his stomach oppressed by eating pears, it is but working hard, which will have the same effect as drinking wine.

PELLITORY OF SPAIN.

COMMON pellitory of Spain, if planted in gardens, thrives very well in this kingdom. There is a sort, growing wild in this country, which is very little, if at all, inferior to the other.

DESCRIPTION. Pellitory is a very common plant, yet must be diligently looked after to be brought to perfection. The root goes downright into the ground, bearing leaves long and finely cut upon the stalks, lying upon the ground, much larger than the leaves of camomile are; at the top it bears one single large flower at a place, having a border of many leaves, white on the upper side, and reddish underneath, with a yellow thrum in the middle, not standing so close as that of camomile.

The other common pellitory, which groweth here spontaneously, hath a root of a sharp biting taste, scarcely discernable by the taste from that before described, from whence arise divers brittle stalks, more than a yard high, with narrow long leaves, finely dented about the edges, standing one above another up to the top. The flowers are many and white, standing in tufts like those of yarrow, with a small yellowish thrum in the middle. The seed is very small.

PLACE. The last groweth in fields, by the hedge-sides, and paths, almost every where in Britain.

TIME. It flowereth at the latter end of June, and in July.

GOVERNMENT AND VIRTUES. It is under the government of Mercury, and is one of the best purgers of the brain that grows. An ounce of the juice taken in a draught of muscadel, an hour before the fit of the ague comes, will assuredly drive away the ague, at the second or third time of taking it at the furthest. Either the herb or root dried and chewed in the mouth, purgeth the brain of phlegmatic humours, thereby not only easing pains in the head and teeth, but also hindering the distilling of the brain upon the lungs and eyes, and preventing cough, phthitics, and consumptions, the apoplexy, and falling sickness. It is an excellent approved remedy in the lethargy. The powder of the herb or root, being snuffed up the nostrils, procureth sneezing, and easeth the head-ach. Being made into an ointment with hog's-lard, it takes away black and blue spots occasioned by blows or falls, and helps both the gout and sciatica.

PEL-

PELLITORY OF THE WALL.

DESCRIPTION. IT riseth up with many brownish red, tender, weak, clear, and almost transparent, stalks, about two feet high, upon which grow at the several joints two leaves somewhat broad and long, of a dark green colour, which afterwards turns brownish, smooth on the edges, but rough and hairy, as the stalks are also. At the joints with the leaves, from the middle of the stalks upwards, where it spreadeth into some branches, stand many small, pale, purplish, flowers, in hairy rough heads or husks, after which comes small, black, and rough, seed, which sticks to any clotn or garment it may chance to touch. The root is somewhat long, with many small fibres thereat, of a dark reddish colour, which abideth the winter, although the stalks and leaves perish, and spring afresh every year.

PLACE. It generally groweth wild, in most parts of the kingdom, about the borders of fields, by the sides of walls, and among rubbish. It prospereth well when brought up in gardens, and, if once planted on the shady side, it will afterwards spring of its own sowing.

TIME. It flowereth in June, July, and beginning of August, and the seed is ripe soon after.

GOVERNMENT AND VITUES. It is under the dominion of Mercury. The dried herb pellitory made up into an electuary with honey, or the juice of the herb, or the decoction thereof made up with sugar or honey, is a singular remedy for any old or dry cough, shortness of breath, and wheesing in the throat. Three ounces of the juice thereof, taken at a time, greatly help the stoppage of the urine, and expel the stone or gravel in the kidneys or bladder, and are therefore usually put among other herbs used in clysters to mitigate pains in the back, sides, or bowels, proceeding from wind, stoppage of urine, the gravel, or stone, as aforesaid. If the bruised herb, sprinkled with some muscadine, be warmed upon a tile, or in a dish, upon a few quick coals in a chafing-dish, and applied to the belly, it hath the same effect. The decoction of the herb, being drunk, easeth pains of the mother, and forwards the menses; it also easeth such complaints as arise from obstructions of the liver, spleen, and reins. The same decoction, with a little honey added thereto, is good to gargle a fore throat. The juice, if held a while in the mouth, easeth pains in the teeth. The distilled water of the herb, drunk with some sugar, produceth the same effect; it also cleanseth the skin from spots, freckles, purples, wheals, sunburn, morpew, &c. The juice, dropped into the ears, easeth the noise thereof, and taketh away the pricking and shooting pains therein. The same, or the distilled

water

water, affwageth hot and swelling imposthumes, burnings and scaldings by fire or water; also hot tumours and inflammations, or breakings out, &c. The said juice made into a liniment, with ceruse and oil of roses, and anointed therewith, cleanseth rotten ulcers, and stops the running sores in childrens heads, and prevents the hair from coming off; it is likewise of great service to persons afflicted with the piles, as it immediately easeth their pain, and, being mixed with goats tallow, relieveth the gout. The juice, or herb itself, bruised, with a little salt, is very effectual to cleanse fistulas and to heal them up safely: it is also of great benefit to any green wound. A poultice made thereof with mallows, and boiled in wine, mixed with wheat, bran, bean-flowers, and some oil, being applied warm to any bruised sinew, tendon or muscle, doth, in a very short time, restore it to its original strength.

The juice of pellitory of the wall, clarified and boiled into a syrup with honey, and a spoonful of it drunk every morning, is very good for the dropsey.

PENNY-ROYAL.

DESCRIPTION. THE common penny-royal is so well known, that it needeth no description.

There is another kind of penny-royal, superior to the above, which differeth only in the largeness of the leaves and stalks; in rising higher, and drooping upon the ground so much. The flowers of which are purple, growing in rundles about the stalk like the other.

PLACE. The first, which is common in gardens, groweth also in many moist and watery places in this kingdom. The second is found wild in Essex, and divers places on the road from London to Colchester, and places adjacent.

TIME. They flower in the latter end of summer.

GOVERNMENT AND VIRTUES. This herb is under Venus. Dioscorides saith, that penny-royal maketh tough phlegm thin, warmeth the coldness of any part that it is applied to, and digesteth raw or corrupt matter: being boiled and drunk, it removeth the courses, and expelleth the dead child and after-birth; being mixed with honey and salt, it voideth phlegm out of the lungs. Drunk with wine, it is of singular service to those who are stung or bit by any venomous beast; applied to the nostrils, with vinegar, it is very reviving to persons fainting and swooning; being dried and burnt, it strengtheneth the gums, and is helpful to those that are troubled with the gout; being applied as a plaster, it taketh away carbuncles and blotches from the face; applied with salt, it helpeth those that are splenetic, or liver-grown. The de-

coction doth help the itch, if washed therewith; being put into baths for women to sit therein, it helpeth the swelling and hardness of the mother. The green herb bruised, and put into vinegar, cleanseth foul ulcers, and taketh away the marks of bruises and blows about the eyes, and all discolouring of the face by fire, and the leprosy, being drunk and outwardly applied; boiled in wine, with honey and salt, it helpeth the tooth ach. It helpeth the cold griefs of the joints, taking away the pains, and warming the cold parts, being fast bound to the place after a bathing or sweating. Pliny addeth, that penny-royal and mint together help faintings or swoonings, infused in vinegar, and put to the nostrils, or a little thereof put into the mouth. It easeth the head-ach, and the pains of the breast and belly, stayeth the gnawing of the stomach, and inward pains of the bowels; being drunk in wine, it provoketh the courses, and expelleth the dead child and after-birth; it helpeth the falling-sickness: put into unwholesome or stinking water that men must drink, as at sea, and where other cannot be had, it maketh it less hurtful. It helpeth cramps or convulsions of the sinews, being applied with honey, salt, and vinegar. It is very effectual for a cough, being boiled in milk and drunk, and for ulcers and sores in the mouth. Mathiolus saith, the decoction thereof, being drunk, helpeth the jaundice, and all pains of the head and sinews that come of a cold cause; and that it helpeth to clear and quicken the eye-sight. Applied to the nostrils of those that have the falling-sickness, or the lethargy, or put into the mouth, it helpeth them much, being bruised in vinegar, and applied. Mixed with barley meal, it helpeth burnings, and, put into the ears, easeth the pains of them.

PEONY, MALE AND FEMALE.

DESCRIPTION. THE male peony riseth up with many brownish stalks, whereon grow a great number of fair green, and sometimes reddish, leaves, each of which is set against another upon a stalk without any particular division in the leaf. The flowers stand at the tops of the stalks, consisting of five or six broad leaves, of a fair purplish red colour, with many yellow threads in the middle, standing about the head, which after riseth to be the seed-vessels, divided into two, three, or four, rough crooked pods like horns, which, being full ripe, open and turn themselves down one edge to another backward, shewing within them divers round, black, shining, seed, having also many red or crimson grains, intermixed with the black, whereby it maketh a very pretty shew. The roots are thick and long, spreading and running down deep in the ground.

The

The ordinary female peony hath many stalks, and more leaves than the male; the leaves not so large, but nicked on the edges, some with great and deep, others with smaller, cuts and divisions, of a dark or dead green colour. The flowers are of a strong heady scent, most usually smaller, and of a more purple colour, than the male, with yellow thrums about the head as the male hath. The seed-vessels are like horns as in the male, but smaller; the seed is black, but less shining. The roots consist of many thick and short tuberous clogs, fastened at the ends of long strings, and all from the head of the root, which is thick and short, and of the like scent with the male.

PLACE AND TIME. They grow in gardens, and flower usually about May.

GOVERNMENT AND VIRTUES. It is an herb of the sun, and under the lion. Physicians say, male peony roots are best; but male peony is best for men, and female peony for women. The roots are held to be of most virtue; then the seeds; next the flowers; and, last of all, the leaves. The root of the male peony, fresh gathered, hath been found by experience to cure the falling sickness; but the surest way is (besides hanging it about the neck, by which children have been cured) to take the root of the male peony washed clean and stamped somewhat small, and infuse it in sack for twenty-four hours at least; afterwards strain it, and take, morning and evening, a good draught for sundry days together before and after a full moon; and this will also cure older persons, if the disease be not grown too old and past cure, especially if there be a due and orderly preparation of the body, with posset-drink made of betony, &c. The root is also effectual for women that are not sufficiently cleansed after childbirth, and such as are troubled with the mother; for which likewise the black seed, beaten to powder and given in wine, is also available. The black seed also, taken before bed-time and in the morning, is very effectual for such as in their sleep are troubled with the disease called ephialtes or incubus, but we do commonly call it the night-mare, a disease which melancholy persons are subject unto: it is also good against melancholy dreams. The distilled water, or syrup made of the flowers, worketh the same effects that the root and the seed do, although more weakly. The female is often used for the purposes aforesaid, by reason the male is so scarce.

PEPPER-WORT, OR DITTANDER.

DESCRIPTION. THE common pepper-wort sendeth forth somewhat long and broad leaves, of a light bluish-green colour, finely dented about the edges, and pointed at the ends, standing upon round hard stalks, three or four feet high, spreading many branches on all sides, and having many small white flowers at the tops of them,

them, after which follow small seed, in small heads. The root is slender, running much under ground, and shooting up again in many places : and both leaves and roots are very hot and sharp of taste, like pepper, for which cause it took the name.

PLACE. It groweth naturally in many parts of the kingdom, as at Clare in Essex ; also near unto Exeter, Devonshire ; upon Rochester Common, Kent ; Lancashire, and divers other places ; but is usually kept in gardens.

TIME. It flowereth in the end of June, and in July.

GOVERNMENT AND VIRTUES. This herb is under the direction of Mars. Pliny and Paulus Æginetus say, that pepper-wort is very effectual for the sciatica, or any other gout, pain in the joints, or any other inveterate grief ; the leaves to be bruised and mixed with old hogs-lard, and applied to the place, and to continue thereon four hours in men, and two hours in women, the place being afterwards bathed with wine and oil mixed together, and then wrapped with wool or skins after they have sweat a little ; it also amendeth the deformities or discolourings of the skin, and helpeth to take away marks, scars, and scabs, or the foul marks of burning with fire or iron. The juice hereof is in some places used to be given in ale to women with child, to procure them a speedy delivery.

PERWINKLE.

DESCRIPTION. THE common sort hath many branches running upon the ground, shooting out small fibres at the joints as it runneth, taking thereby hold in the ground, and rooteth in divers places ; at the joints of these branches stand two small, dark green, shining, leaves, somewhat like bay-leaves, but smaller, and with them come forth also flowers, one at a joint standing upon a tender footstalk, being somewhat long and hollow, parted at the brims sometimes into four, sometimes into five, leaves ; the most ordinary sort are of a pale blue colour, some are pure white, and some of a dark reddish purple colour. The root is little bigger than a rush, bushing in the ground, and creeping with its branches, and is most usually planted under hedges, where it may have room to grow.

PLACE. Those with the pale blue and those with the white flowers grow in woods and orchards by the hedge-sides in divers places of this land ; but those with the purple flowers in gardens only.

TIME. They flower in March and April.

GOVERNMENT AND VIRTUES. Venus owns this herb, and saith, that the leaves, eaten by man and wife together, cause love between them. The perwinkle is a great

binder,

binder, staying bleeding both at mouth and nose, if some of the leaves be chewed ; the French use it to stay women's courses. Dioscorides, Galen, and Ægineta, commend it against the laſk, and fluxes of the belly, to be drunk in wine.

St. PETER's WORT.

DESCRIPTION. IT riſeth up with ſquare upright ſtalks for the moſt part, ſomewhat greater and higher than St. John's wort, but brown in the ſame manner, having two leaves at every joint, ſomewhat like, but larger than, St. John's wort, and a little rounder pointed, with few or no holes to be ſeen therein, and having ſometimes ſome ſmaller leaves riſing from the boſom of the greater, and ſometimes a little hairy alſo. At the tops of the ſtalks ſtand many ſtar-like flowers, with yellow threads in the middle, very like thoſe of St. John's wort, inſomuch that this is hardly diſcerned from it, but only by the largeneſs and height, the ſeed being alike in both. The root abideth long, ſending forth new ſhoots every year.

PLACE. It groweth in many groves and ſmall low woods, in divers places of this land, as in Kent, Huntingdonſhire, Cambridgeſhire, and Northamptonſhire, as alſo near water-courſes in other places.

TIME. It flowereth in June and July, and the ſeed is ripe in Auguſt.

GOVERNMENT AND VIRTUES. It is of the ſame property with St. John's wort, but ſomewhat weak, and therefore more ſeldom uſed. Two drams of the ſeed taken at a time, in honeyed water, purge cholerick humours, as ſaith Dioſcorides, Pliny, and Galen, and thereby helpeth thoſe that are troubled with the ſciatica. The leaves are uſed, as St. John's wort, to help thoſe places of the body that have been burnt with fire.

PIMPERNEL.

DESCRIPTION. COMMON pimpernel hath many weak ſquare ſtalks lying on the ground, beſet all along with two ſmall and almoſt round leaves at every joint one againſt another, very like chickweed ; but hath no footſtalks, for the leaves as it were compaſs the ſtalk : the flowers ſtand ſingly, conſiſting of five round ſmall pointed leaves of a fine pale red colour, with ſo many threads in the middle, in whole places ſucceed ſmooth round heads, wherein is contained ſmall ſeed. The root is ſmall and fibrous, perishing every year.

PLACE. It groweth every where almoſt, as well in the meadows and corn-fields as by the way-fides, and in gardens ariſing of itſelf.

No. 20.

4 G

TIME.

TIME. It flowereth from May to August, and the seed ripeneth in the mean time, and falleth.

GOVERNMENT AND VIRTUES. It is a solar herb. This is of a cleansing and attractive quality, whereby it draweth forth thorns or splinters, or other such like things, from the flesh, and, put up into the nostrils, purgeth the head; and Galen faith' also they have a drying faculty, whereby they are good to close the lips of wounds, and to cleanse foul ulcers. The distilled water or juice is much esteemed by the French to cleanse the skin from any roughness, deformity, or discolouring, thereof: being boiled in wine, and given to drink, it is a good remedy against the plague and other pestilential fevers, if the party, after taking it, lie warm in bed and sweat for two hours after, and use the same twice at least. It helpeth also all stings and bitings of venomous beasts or mad dogs, being used inwardly, and applied outwardly; it also openeth the obstructions of the liver, and is very available against the infirmities of the reins; it provoketh urine, and helpeth to expel the stone and gravel out of the kidneys and bladder, and helpeth much in all inward wounds and ulcers. The decoction or distilled water is no less effectual to be applied to all wounds that are fresh and green, or old filthy fretting and running ulcers, which it very effectually cureth in a short space. A little honey mixed with the juice, and dropped into the eyes, cleanseth them from cloudy mists, or thick films which grow over them and hinder the sight. It helpeth the tooth-ach, being dropped into the ear on the contrary side of the pain. It is also effectual to ease the pains of the hemorrhoids or piles.

GROUND - PINE.

DESCRIPTION. THE common ground-pine groweth low, seldom above a hand's-breadth high, shooting forth divers small branches, set with slender small long narrow greyish or whitish leaves, somewhat hairy, and divided into three parts, many times bushing together at a joint, and sometimes some growing scatteredly upon the stalks, smelling somewhat strong like unto rosin; the flowers are somewhat small, and of a pale yellow colour, growing from the joints of the stalks all along among the leaves, after which come small and round husks: the root is small and woody, perishing every year.

PLACE. It groweth more plentifully in Kent than in any other county of this land; as also in many places from on this side Dartford, along to Rochester, and upon Chatham down.

TIME. It flowereth and giveth seed in the summer months.

GOVERNMENT AND VIRTUES. Mars owns the herb. The decoction of ground-pine, drunk, doth wonderfully prevail against the stranguary, or any inward pains arising from the diseases of the reins and urine, and is good for all obstructions of the liver and spleen, and gently openeth the body, for which purpose they were wont in former times to make pills with the powder thereof and the purple figs. It helpeth the diseases of the mother, used inwardly or applied outwardly, procuring the courses, and expelling the dead child and after-birth. It acts so powerfully, that it is utterly forbidden for women with child, in that it will cause abortion, or delivery before the time: it is effectual also in all pains and diseases of the joints, as gouts, cramps, palsies, sciatica, and aches; either the decoction of the herb in wine taken inwardly, or applied outwardly, or both, for some time together; for which purpose the pills, made with the powder of ground pine, and of hermodactils, with Venice turpentine, are very effectual. These pills also are good for the dropfy, to be continued for some time. The same is a good help for the jaundice, and for griping pains in the joints, belly, or inward parts; it helpeth also all diseases of the brain, proceeding of cold and phlegmatic humours and distillations, as also the falling-sickness. It is an especial remedy for the poison of the aconites of all sorts, and other poisonous herbs, as also against the stinging of any venomous creature. It is a good remedy for a cold cough, especially in the beginning. For all the purposes aforesaid, the herb, being tunned up in new drink and drunk, is almost as effectual, but far more acceptable to weak and dainty stomachs. The distilled water of the herb hath the same effects, but in a smaller degree. The conserve of the flowers doth the like, which Mathiolus much commendeth against the palsy. The green herb, or the decoction thereof, being applied, dissolveth the hardness of womens breasts, and all other hard swellings in any other part of the body. The green herb also, applied, or the juice thereof with some honey, not only cleanseth putrid, stinking, foul, and malignant, ulcers and sores of all sorts, but healeth up the lips of green wounds in any part also.

PLANTAIN.

THIS groweth so familiarly in meadows and fields, and by pathways, and is so well known, that it needeth no description.

TIME. It is in its beauty about June, and the seed ripeneth shortly after.

GOVERNMENT AND VIRTUES. It is under the command of Venus, and cures the head by antipathy to Mars, and the privities by sympathy to Venus, neither is there hardly a martial disease but it cures. The juice of plantain, clarified and drunk for
divers

divers days together, either by itself or in other drink, prevaieth wonderfully against all torments or excoriations in the bowels, helpeth the distillations of rheum from the head, and stayeth all manner of fluxes, even women's courses when they flow too abundantly. It is good to stay spitting of blood, and other bleedings at the mouth, or the making of foul or bloody water by reason of any ulcer in the reins or bladder; and also stayeth the too free bleeding of wounds. It is held an especial remedy for those that are troubled with the phthysic, or consumption of the lungs, or ulcers in the lungs, or coughs that come of heat. The decoction or powder of the roots or seed is much more binding for all the purposes aforesaid than the leaves. Dioscorides saith, That the root boiled in wine helpeth the tertian and quartan ague. The herb, but especially the seed, is held to be profitable against the dropsy, the falling-sickness, the yellow jaundice, and stoppings of the liver and reins. The roots of plantain and pellitory of Spain beaten to powder, and put into hollow teeth, take away the pains of them: the clarified juice or distilled water dropped into the eyes cooleth the inflammations in them, and taketh away the pin and web; and, dropped into the ears, easeth pains in them, and helpeth and restoreth the hearing: the same also, with juice of houseleek, is profitable against all inflammations and breakings out of the skin, and against burnings and scaldings by fire or water. The juice or decoction, made either of itself or other things of like nature, is of much use and good effect for old and hollow ulcers that are hard to be cured, and for cancers and fores in the mouth or privy parts; and helpeth also the piles. The juice mixed with oil of roses, and the temples and forehead anointed therewith, easeth the pains of the head proceeding from heat, and helpeth lunatic and phrenetic persons very much; as also the biting of serpents or a mad dog: the same also is profitably applied to all hot gouts in the feet or hands, especially in the beginning. It is also good to be applied where any bone is out of joint, to hinder inflammation, swellings, and pains, that presently rise thereupon. The powder of the dried leaves, taken in drink, killeth worms of the belly, and, boiled in wine, killeth worms that breed in old and foul ulcers. One part of plantain water, and two parts of the brine of powdered beef, boiled together and clarified, is a most sure remedy to heal all spreading scabs and itch in the head or body, all manner of tetter, ringworms, the shingles, and all other running and fretting sores. Briefly, the plantains are singular good wound-herbs to heal fresh or old wounds or sores, either inward or outward.

P L U M B S.

THESE are so well known that they need no description.

GOVERNMENT AND VIRTUES. All plumbs are under Venus: those that are sweet moisten the stomach, and make the belly soluble; those that are sour quench thirst more,

more, and bind the belly; the moist and waterish sooner corrupt in the stomach than the firm, which are more nourishing and less offensive. The dried fruit, sold by the grocers under the name of damask prunes, do somewhat loosen the belly, and, being stewed, are often used, both in health and sickness, to procure appetite and gently open the belly, allay choler, and cool the stomach. The juice of plumb-tree leaves, boiled in wine, is good to wash and gargle the mouth and throat, to dry the flux of rheum coming to the palate, gums, or almonds of the ears. The gum of the tree is good to break the stone. The gum, or leaves, boiled in vinegar, and applied, will kill tetters and ring-worms. Mathiolus saith, the oil pressed out of the stones as oil of almonds is made, is good against the inflamed piles, the tumours or swellings of ulcers, hoarseness of the voice, roughness of the tongue and throat, and likewise pains in the ears. Five ounces of the said oil, taken with one ounce of muscadine, will expel the stone, and help the cholic.

POLIPODY OF THE OAK.

DESCRIPTION. THIS is a small herb, consisting of nothing but roots and leaves, bearing neither stalk, flower, nor seed, as it is thought. It hath three or four leaves rising from the root, every one singly by itself, of about a hand's-length, which are winged, consisting of many small narrow leaves, cut into the middle rib standing on each side of the stalk, large below, and smaller up to the top, not dented or notched on the edges at all like the male fern; of a sad green colour, and smooth on the upper side, but on the under side somewhat rough, by reason of some yellowish spots thereon. The root is smaller than one's little finger, lying sloping, or creeping along under the upper crust of the earth, brownish on the outside, greenish within, of a sweet harshness in taste, set with certain rough knobs on each side thereof, having also much moss or yellow hair upon it, and some fibres underneath, whereby it is nourished.

PLACE. It groweth as well upon old rotten stumps or trunks of trees, as oak, beech, hazel, willow, or any other, as in the woods under them, and upon old mud walls, also in mossy, stony, and gravelly, places, near unto the woods. That which grows upon oak is accounted the best, but the quantity thereof is scarce sufficient for common use.

TIME. Being always green, it may be gathered for use at any time.

GOVERNMENT AND VIRTUES. It is an herb of Saturn. Polypodium of the oak is dearest; but that which grows upon the ground is best to purge melancholy; if the humour proceed from other causes, chuse your polypodium accordingly. Mesue

saith, that it drieth up thin humours, digesteth thick and tough, and purgeth burnt choler, and especially thick and tough phlegm, and thin phlegm also, even from the joints; and is therefore good for those that are troubled with melancholy, or quartan agues, especially if it be taken in whey or honeyed water, in barley-water, or the broth of a chicken, with epithimum, or with beets and mallows. It is also good for the hardness of the spleen, and for prickings or stitches in the sides, as also for the cholic; some chuse to put to it some fennel, anniseed, or ginger, to correct the loathing it causeth to the stomach, which is not at all necessary, it being a safe and gentle medicine, fit for all persons at all seasons, which daily experience confirmeth; and an ounce of it may be given at a time in a decoction, if there be not senna, or some other strong purgermixed with it. A dram or two of the powder of the dried roots, taken fasting in a cup of honeyed water, worketh gently, for all the purposes aforesaid. The distilled water, both from the roots and leaves, is much commended for the quartan ague, if taken for several days together; as also against melancholy, or fearful or troublesome sleeps or dreams; and with some sugar-candy dissolved therein, is good against the cough, shortness of breath, and wheezing, and those distillations of thin rheum upon the lungs which cause phthysics, and oftentimes consumptions. The fresh roots beaten small, or the powder of the dried roots mixed with honey, and applied to any of the limbs out of joint, doth much help them. Applied to the nose, it cureth the disease called polypus, which is a piece of fungous flesh growing therein, which in time stoppeth the passage of breath through that nostril; and it helpeth those clefts or chops that come between the fingers or toes.

THE POPLAR TREE.

DESCRIPTION. THERE are two sorts of poplars which are very familiar with us, viz. the white and the black: The white sort groweth large, and tolerably high, covered with a smooth, thick, white, bark, especially the branches, having large leaves cut into several divisions, almost like a vine-leaf, but not of so deep a green on the upper side, and hoary white underneath, of a good scent, the whole representing the form of coltsfoot. The catkins, which it bringeth forth before the leaves, are long, of a faint reddish colour, which fall away, and but seldom bear good seed with them. The wood thereof is smooth, soft, and white, very finely waved, whereby it is much esteemed.

The black poplar groweth higher and straiter than the white, with a greyish bark, bearing broad and green leaves somewhat like ivy leaves, not cut in on the edges

like

like the white, but whole and dented, ending in a point, and not white underneath, hanging by slender long foot-stalks, which, with the air, are continually shaken as the aspen-leaves are. The catkins hereof are greater than of the white, composed of many round green berries, as it were set together in a long cluster, containing much downy matter, which, on being ripe, is blown away with the wind. The clammy buds hereof, before they are spread into leaves, are gathered to make the *unguentum populeon*, and are of a yellowish green colour, and small, somewhat sweet, but strong. The wood is smooth, tough, and white, and easy to be cloven. On both these trees groweth a sweet kind of musk, which formerly used to be put into sweet ointments.

PLACE. They grow in moist woods, and by the water-side, in all parts of the kingdom; but the white sort is not so frequently to be met with as the other.

TIME. They are in leaf at the end of summer, but the catkins come before the leaves, as above-mentioned.

GOVERNMENT AND VIRTUES. Saturn hath dominion over both. The white poplar, saith Galen, possesses a cleansing property; one ounce in powder of the bark thereof, being drunk, saith Dioscorides, is a remedy for those that are troubled with the sciatica or the stranguary. The juice of the leaves, dropped warm into the ears, easeth the pains thereof. The young clammy buds or eyes, before they break out into leaves, bruised, and a little honey put to them, are a good medicine for a dull sight. The black poplar is held to be more cooling than the white, and therefore the leaves bruised with vinegar, and applied, help the gout. The seed, drunk in vinegar, is held good against the falling sickness. The water, that dropeth from the hollow places of this tree, taketh away warts, pushes, wheals, and other out-breakings in the body. The young black poplar buds, saith Mathiolus, are much used by women to beautify their hair, bruising them with fresh butter, and straining them after they have been kept for some time in the sun. The ointment called *populeon*, which is made of this poplar, is singularly good for all heat and inflammation in any part of the body, and tempereth the heat of wounds. It is much used to dry up the milk in women's breasts, when they have weaned their children.

P O P P Y.

OF these there are three kinds, viz. the white and black of the garden, and the erratic wild poppy, or corn-rose.

DESCRIPTION. The white poppy hath at first four or five whitish green leaves lying upon the ground, which rise with the stalk, compassing it at the bottom of them,

them, and are very large, much cut or torn in on the edges, and dented also. The stalk, which is usually four or five feet high, hath sometimes no branches at the top, and usually but two or three at most, bearing but one head, each wrapped in a thin skin, which boweth down before it be ready to blow, and then, rising and being broken, the flower within it spreadeth itself open, and consisteth of four very large round white leaves, with many whitish round threads in the middle, set about a small round green head, having a crown, or star-like cover at the head thereof, which, growing ripe, becometh as large as a great apple, wherein are contained a great number of small round seed, in several partitions or divisions next unto the shell, the middle thereof remaining hollow and empty. All the whole plant, leaves, stalks, and heads, while they are fresh, young, and green, yield a milk, when they are broken, of an unpleasant bitter taste, almost ready to provoke puking, and of a strong heady smell, which, being condensed, is called opium. The root is white and woody, perishing as soon as it hath given ripe seed.

The black poppy differeth but little from the former, until it beareth its flower, which is somewhat less, and of a black purplish colour, but without any purple spots in the bottom of the leaf. The head of seed is much less than the former, and openeth itself a little round about the top, under the crown, so that the seed, which is very black, will fall out, if the head is turned downwards.

The wild poppy, or corn rose, hath long and narrow leaves, very much cut in on the edges into many divisions, of a light green colour, and sometimes hairy withal: the stalk is blackish and hairy also, but not so tall as the garden kinds, having some such like leaves thereon as grow below, parted into three or four branches sometimes, whereon grow small hairy heads, bowing down before the skin breaks wherein the flower is inclosed, which, when it is full-blown, is of a fair yellowish red or crimson colour, and in some much paler, without any spot in the bottom of the leaves, having many black soft spots in the middle, compassing a small green head, which, when it is ripe, is no larger than one's little finger end, wherein is contained much black seed, smaller by half than that of the garden. The root perisheth every year, and springeth again of its own sowing. Of this kind there is one smaller in all the parts thereof, but differeth in nothing else.

PLACE. The garden kinds do not naturally grow wild in any place, but are all sown in gardens, where they grow. The wild poppy, or corn-rose, is plentiful enough, and many times too much so, in the corn fields in all parts of the kingdom, also upon the banks of ditches and by hedge-sides. The smaller wild kind is also to be met with in those places, though not so plentifully as the former.

TIME. The garden kinds are usually sown in the spring, which then flower about the end of May, and somewhat earlier, if they are of their own sowing. The wild kinds usually flower from May until July, and the seed of them is ripe soon after their flowering.

GOVERNMENT AND VIRTUES. The herb is lunar, and the juice of it is made into opium. The garden poppy heads, with the seed, made into a syrup, are frequently, and to good effect, used to procure rest and sleep to the sick and weak, and to stay catarrhs and defluxions of hot thin rheums from the head into the stomach, and upon the lungs, causing a continual cough, the fore-runner of a consumption; it helpeth also hoarseness of the throat, and when a person hath lost the power of articulation; for all which complaints the oil of the seed is also a good remedy. The black seed, boiled in wine and drunk, is also said to stay the flux of the belly, and the menses. The empty shells of the poppy heads are usually boiled in water, and given to procure sleep; the leaves likewise, when so boiled, possess the same virtue. If the head and temples be bathed with the decoction warm, the oil of poppies, the green leaves or heads bruised and applied with a little vinegar, or made into a poultice with barley-meal, or hog's grease, it cooleth and tempereth all inflammations, as also the disease called St. Anthony's fire. It is generally used in treacle and mithridate, and in all other medicines that are used to procure rest and sleep, and to ease pains in the head, as well as in other parts. It is also used to cool inflammations, agues, or phrensies, and to stay defluxions which cause a cough or consumption, and also other fluxes of the belly: it is frequently put into hollow teeth to ease the pain thereof, and hath been found by experience to help gouty pains.

The wild poppy, or corn rose, Mathiolus saith, is good to prevent the falling sickness. The syrup made with the flowers is given with good effect to those that have the pleurisy; and the dried flowers also, either boiled in water, or made into powder, and drunk, either in the distilled water of them, or in some other drink, work the like effect. The distilled water of the flowers is held to be of much good use against surfeits, being drunk evening and morning; it is also more cooling than any of the other poppies, and therefore cannot but be as effectual in hot agues, phrensies, and other inflammations, whether external or internal, the syrup or water to be used inwardly, and the green leaves outwardly, either in an ointment or any other convenient manner in which it can be applied. Galen saith, the seed is dangerous to be used inwardly.

PURSLAIN.

GARDEN purslain, being used as a sallad herb, is so well known that it needs no description.

GOVERNMENT AND VIRTUES. This is an herb of the moon. It is good to cool any heat in the liver, blood, reins, and stomach, and, in hot agues, nothing better can be administered; it stayeth hot and cholerick fluxes of the belly, the menses, fluor albus, gonorrhea, and running of the reins; also distillations from the head, and pains therein proceeding from heat, want of sleep, or the phrensy. The seed is more effectual than the herb, and is singularly useful in cooling the heat and sharpness of the urine, lust, venereal dreams, and the like, insomuch that the over frequent use of it extinguisheth the heat and virtue of natural procreation. The seed, bruised and boiled in wine, and given to children, expelleth worms. The juice of the herb is held equally effectual for all the purposes aforesaid; as also to stay vomitings; taken with some sugar or honey, it helpeth an old dry cough, shortness of breath, and the phthysic, and stayeth immoderate thirst. The distilled water of the herb is used by many, being more palatable, with a little sugar, to produce the same effects. The juice also is good in ulcers and inflammations of the secret parts, likewise of the bowels, and hemorrhoids when they are ulcerous, or have excoriations in them. The herb, bruised, and applied to the forehead and temples, allayeth excessive heat therein, hindering rest and sleep; and, applied to the eyes, taketh away the redness and inflammation in them, and those other parts where pusses, wheals, pimples, St. Anthony's fire, and the like, break forth, especially if a little vinegar be put to it; and being applied to the neck, with equal quantities of galls and linseed together, taketh away all pain therefrom, and what is termed the crick in the neck. The juice is also used with oil of roses for the above purposes, for blasts by lightning, and burns by gunpowder, or for women's sore breasts, and to allay heat in all other sores or hurts. Applied also to the navels of children that are too prominent, it reduceth them. It is likewise good for sore mouths, and gums that are swelled, as well as to fasten loose teeth. Camerarius saith, that the distilled water cured the tooth-ach when all other remedies failed, and that the thickened juice, made into pills with the powders of gum tragacanth and arabic, being taken, greatly relieveth those that make bloody water. Applied to the gout, it easeth pains thereof, and helpeth hardness of the sinews, if not arising from the cramp, or a cold cause. This herb, if placed under the tongue, assuageth thirst.

P R I M R O S E S.

THESE are so well known that they need no description. Of the leaves of primroses is made an excellent salve to heal green wounds.

P R I V E T.

DESCRIPTION. THE common privet runs up with many slender branches, to a tolerable height and breadth, and is frequently used in forming arbours, bowers, and banqueting-houses, and shaped sometimes into the forms of men, horses, birds, &c. which, though at first requiring support, grow afterwards strong enough of themselves. It beareth long and narrow green leaves by couples, and sweet-smelling white flowers in tufts at the ends of the branches, which turn into small black berries that have a purplish juice within them, and some seeds that are flat on the one side, with a hole or dent therein.

PLACE. It groweth in divers woods in Great Britain.

TIME. The privet flowereth in June and July, and the berries are ripe in August and September.

GOVERNMENT AND VIRTUES. It is under the influence of the moon, and is but little used in physic in these times, except in lotions to wash sores and sore mouths, and to cool inflammations and dry up fluxes; yet Mathiolus saith, it serveth every purpose for which the cypress tree, or oriental privet, is approved of by Dioscorides and Galen. He further saith, that the oil extracted from the flowers of privet by infusion, and set in the sun, is very serviceable in inflammatory wounds, and for the head-ach when arising from a hot cause. There is a sweet water also distilled from the flowers, which is good for all those diseases that require cooling and drying, and therefore helpeth all fluxes of the belly or stomach, bloody fluxes, and women's courses, being either drunk, or otherwise applied; as also for those that void blood at their mouth or at any other place; likewise for distillations of rheums in the eyes, especially if it be used with tutty.

P O M E C I T R O N T R E E.

THERE are three kinds of pomecitrons. The tree is generally called *malus medica*, *vel citria*.

DESCRIPTION. 1. The greater pomecitron tree, or *malus citria major*. This tree doth not grow very high in some places, but rather with a short crooked body, and in

in others not much lower than the lemon-tree, spreading out into sundry great long arms and branches; set with long and sharp thorns, and fair, large, and broad, fresh green leaves, a little dented about the edges, with a shew of almost invisible holes in them, but less than the orange-leaves have; of a very sweet scent, the flowers green at the leaves, all along the branches, being somewhat longer than those of the orange; made of five thick, whitish, purple, or bluish, leaves, with some threads in the middle, after which followeth fruit all the year, being seldom seen without ripe fruit, and half-ripe, and some young and green, and blossoms, all at once. This kind beareth great and large fruit, some the size of a musk melon, others less, but all of them with a rugged, bunched-out, and uneven, yellow bark, thicker than in any of the other sorts, with a sour juice in the middle, and somewhat great, pale, whitish, or yellow, seed, with a bitter kernel lying in it; the smell of this fruit is very strong and comfortable to the senses.

2. The smaller pomecitron tree, *citria malus minor*, *five limonera*; this tree groweth very like the former, but the leaves are somewhat smaller and shorter, and so are the thorns; the flowers are of a deep bluish colour, and the fruit less and longer than they, but no larger than the small fruit of the former; the rind is also thick and yellow, but not so rugged, having more sour juice and fewer seeds.

3. *Citria malus*, *five limonera pregnans*. This differs very little from the foregoing.

PLACE AND TIME. All these sorts of citrons are cultivated in Spain, by the curious, but were transported thither from sundry places abroad. The great pomecitron was brought first from Media and Persia, and was therefore called *malum Medicum* and *malum Persicum*. The last was brought from the fortunate islands. They are continually in flower and bear fruit throughout the year.

GOVERNMENT AND VIRTUES. These are solar plants, yet they are of different qualities; all the parts of the fruit hereof, both the outer and inner rind, as well as the juice and seed, are of excellent use, though of contrary effects one to another; some being hot and dry, whilst others are cold and dry; the outer yellow rind is very sweet in smell, highly aromatic and bitter in taste; and, dried, is a sovereign cordial for the heart, and an excellent antidote against venom and poison in cases of the plague or any other infection; it warmeth and comforteth a cold and windy stomach, and disperseth cold, raw, and undigested, humours therein, or in the bowels, and mightily expelleth wind. Being chewed in the mouth, it helpeth a stinking breath; it also helps digestion, and is good against melancholy. The outer rinds are often used in cordial electuaries, and preservatives against infection and melancholy. It also helpeth to loosen the body, and therefore there is a solutive electuary

made therewith, called *electuarium de citro solutivum*, to evacuate the bodies of cold phlegmatic constitutions, and may safely be used where choler is mixed with phlegm. The inner white rind of this fruit is rather unfavoury, almost without taste, and is not used in physick. The four juice in the middle is cold, and far surpasseth that of lemons in its effects, although not so sharp in taste. It is singularly good, in all pestilential and burning fevers, to restrain the venom and infection, to suppress the choler and hot distemper of the blood, and to quench thirst; and correcteth the bad disposition of the liver. It stirs up an appetite, and refreshes the over-spent and fainting spirits: resisteth drunkenness, and helpeth giddiness of the head, by the hot vapours arising therein, which causeth a phrenzy for want of sleep. The seed not only equalleth the rind in its virtues, but in many instances surpasseth it.

P E P P E R.

KINDS AND NAMES. THERE are several sorts of pepper, as black, white, and long, pepper; called *piper nigrum, album, et longum*. The black, and white, pepper, differ not either in manner of growing, or in form of leaf or fruit. The long pepper also grows in the same manner, but differeth in the fruit. All these sorts grow on a climbing bush, in the East Indies, after one manner, that is, as hops grow with us; so that, if they be not sustained by some tree or pole, on which they may climb and spread, they will lie down on the ground, and thereon run, and shoot forth small fibres at every joint. But the usual manner is to plant a branch taken from the bush, near some tall tree, great cane, or pole, and so it will quickly, by winding itself about such props, get to the top thereof; being full of joints, and shooting forth fair, large, leaves, one at each joint, being almost round, but ending in a point, green above, and paler underneath, with a great middle rib, and four other ribs, somewhat less, spreading from it, two on each side, and smaller therein also, unto the edges, which are smooth and plain, somewhat thin, and set on a pretty long foot-stalk. The fruit, or pepper, whether black, white, or long, groweth at the same joint, but on the contrary side, opposite to the leaf, round about a long stalk, somewhat thinly set all along thereon, or not so close as a bunch of grapes; the root hath sundry joints creeping in the ground, with fibres at the joints. The white pepper is hardly distinguishable from the black, by the plants thereof, until it becomes ripe, (for the white and black pepper grow on different bushes,) but that the leaves are of a little paler green colour, and the grains or berries are white, solid, firm, without wrinkles, and more aromatic. The long pepper hath leaves of very near the same form and size, but a little longer pointed, of

a paler green colour, thinner also, and with a shorter foot-stalk, but four or five ribs sometimes on each side, according to the largeness of the leaf, with other smaller veins therein, and has less acrimony and hot taste than the black. The fruit of this also groweth in like manner at the joints, opposite to each leaf, which are closer set together than in the black, consisting of many small grains as it were set close together in rows, and not open and separate as in the black and white pepper; of an ash colour when it is ripe.

GOVERNMENT AND VIRTUES. All the peppers are under the dominion of Mars, and of temperature hot and dry almost in the fourth degree, but the white pepper is the hottest; which sort is much used by the Indians, many of whom use the leaves as Europeans do tobacco; and even the pepper itself they also chew, taking from the branch one grain after another, while they are fresh.

Pepper is much used with us in meats and sauces, comforteth and warmeth a cold stomach, consumeth crude and moist humours therein, and stirreth up the appetite; It helpeth to break or dissolve wind in the stomach or bowels, to provoke urine, to help the cough and other diseases of the breast, and is effectual against the bitings of serpents and other poisons, and to that purpose it is an ingredient in the great antidotes: but the white pepper, as being more sharp and aromatical, is of more effect in medicine; and so is the long, being more used to be given for agues to warm the stomach before the coming of the fit, thereby to abate the shaking thereof. All of them are used against the quinsy, being mixed with honey, and taken inwardly and applied outwardly, and disperse the kernels, as well in the throat as in any other parts of the body.

Mathiolus maketh mention of a kind of pepper, which he calleth *piper Æthiopicum*, brought with other merchandize from Alexandria into Italy, and groweth in long cods like beans or pease; but many cods set together at a place, whose grains within them, being like pepper both in form and taste, but smaller, stick very close to the inside: this sort Serapio calleth *granum zelin*.

Monardus also maketh mention of a kind of long pepper, that groweth in all the tract of the continent of the West Indies. This kind of pepper is half a foot long, and of the thickness of a small rope, consisting of many rows of small grains, set close together as in the head of plantane, and is black when ripe; and hotter in taste, and more aromatical and pleasant, than capsicum, and preferred before black pepper, and groweth (says he) on high trees or plants.

GUINEA PEPPER.

KINDS AND NAMES. THERE are many sorts thereof found out and brought to our knowledge in these latter days. Gregorius de Riggio, a Capuchin Friar, maketh mention of a dozen several sorts, or varieties at the least, in the fruit or cods; though in any thing else very little differing: there are likewise some other varieties, observed by Clusius and others.

DESCRIPTION. The most ordinary Guinea pepper with long husks, *Capsicum majus vulgatus oblongis siliquis*. By this you may frame the description of all the rest, the main difference consisting in the form of the fruit, whether husk or cods. This plant riseth up with an upright firm round stalk, with a certain pith within them; rising about two feet high in this country, and not exceeding three feet in any other hotter climate, spreading into many branches on all sides, even from the very bottom, which divide themselves again into other smaller branches, at each joint, whereof come two long leaves upon short footstalks, somewhat bigger than those of nightshade, with divers veins in them, not dented about the edges at all, and of a dark green colour; the flowers stand severally at the joints, with leaves like the flowers of nightshade, consisting most usually of five, and sometimes six, white small-pointed leaves, standing open like a star; with a few yellow threads in the middle, after which come the fruit, either great or small, long or short, round or square, as the kind is, either standing upright or hanging down, as their flowers shew themselves either of this or that form; in this, about three inches in length, thick and round at the stalk, and smaller towards the end, which is not sharp, but round pointed, green at the first, but, when full ripe, of a very deep shining crimson colour; on the outside of which is a thick skin, and white on the inside, of a sweet pleasant smell, having many flat yellow seeds therein, cleaving to certain thin skins within it, which are broad at the upper end and narrow at the lower, leaving the end or point empty within, not reaching so far; the husk or seed of which is of so hot and fiery a taste, as to inflame and burn the mouth and throat for a long time after it is chewed, and almost ready to choak one that taketh much at a time thereof: the root is composed of a great tuft or bush of threads, which spreads plentifully on the ground, and perisheth even in hot countries after it hath ripened all its fruit.

There are nineteen other sorts of Guinea pepper, all which, except the undermentioned, differ so little from that already described, as not to be worth explanation.

Guinea pepper with hairy stalks, *capsicum caule piloso*. This groweth with green round stalks, set full of white hairs, contrary to all other sorts; at the branches come
forth

forth twofuch leaves as the beforementioned one hath, but rather larger; the flowers are white, confifting of five leaves like the rest, which are likewise larger; after which come the cods, green at first, and, when ripe, red, like the rest, which are somewhat great and long, ending in a very long point; not differing from the former sorts in the seed and roots.

PLACE AND TIME. All these sorts of pepper came from the West Indies, called America, and the several parts thereof, Brasil being reckoned as a part of it, and our Summer Islands also; but here in England (though erroneously) we give it the name of Guinea pepper, as though it originally came from thence. They are now raised in gardens in all the provinces of Europe, excepting in very cold countries, and grow in many places of Italy, Spain, &c.

They do not sow them in hot countries before the end of March or beginning of April, and at the soonest they do not flower before August following, and their red cods ripen not thoroughly until November, when they will continue both with flower and fruit most of the winter, where the weather is not very intense; but in very cold climates they perish with the first frost; and therefore must be carefully housed, if any will preserve them.

GOVERNMENT AND VIRTUES. All these sorts of pepper are under Mars, and are of a fiery, hot, and sharp, biting, taste, and of temperature hot and dry to the end of the fourth degree; they burn and inflame the mouth and throat so extremely, that it is hard to be endured; and, if it be outwardly applied to the skin in any part of the body, it will exulcerate and raise it as if it had been burnt with fire or scalded with hot water. The vapours that arise from the husks or cods, while one doth but open them to take out the seed, (especially if they beat them into powder, or bruise them,) will so pierce the brain, by flying up into the head through the nostrils, as to procure violent sneezings, and draw down abundance of thin rheum, forcing tears from the eyes, and will all pass into the throat, and provoke a sharp coughing, and cause violent vomiting; and, if any shall with their hands touch their face or eyes, it will cause so great an inflammation, that it will not be remedied in a long time, by all the bathing thereof with wine or cold water that can be used, but yet will pass away without further harm. If any of it be cast into fire, it raiseth grievous strong and noisome vapours, occasioneth sneezing, coughing, and strong vomiting, to all that be near it; if it should be taken simply of itself, (though in a very small quantity, either in powder or decoction,) it would be hard to endure, and might prove dangerous to life.

Having now given you an account of the dangers attending the immoderate use of these violent plants and fruits, I shall next direct you how to proceed in order to
make

make them become serviceable for health, being corrected and cleansed from all their evil and noisome qualities.

Preparation of the Guinea Pepper.

Take the ripe cods of any sort of the Guinea pepper, (for they are in property all alike,) and dry them well, first of themselves, and then in an oven after the bread is taken out: put it into a pot or pipkin, with some flour, that they may be quite dried; then cleanse them from the flour, and their stalks, if they have any; cut both husks and seeds within them very small, and to every ounce of them put a pound of wheat-flour; make them up together into cakes or small loaves, with leaven proportioned to the quantity you make; bake these as you do bread of the small size, and, when baked, cut it again into smaller parts, and then bake it again, that it may be as dry and hard as a biscuit, which, beaten into fine powder, and sifted, may be kept for any of the uses hereafter mentioned, or may serve instead of ordinary pepper to season meat or broth; for sauce or any other purpose the East-Indian pepper doth serve, for it doth not only give good taste or relish to the meat or sauce, but is found to be very good both to disperse the wind and the cholic in the body: It is of singular service to be used with flatulent or windy diet, and such as breeds moisture and crudities; one scruple of the said powder, taken in a little broth, of veal or of a chicken, gives great relief and comfort to a cold stomach, causing flegm and such viscous humours as lie low in the bottom thereof to be voided; it helpeth digestion, for it occasioneth an appetite to meat, provoketh urine, and, taken with saxifrage water, expelleth the stone in the kidneys and the flegm that breedeth them; and taketh away dimness or mistiness of the sight, being used in meats; taken with Pillulæ Aleophanginæ, it helpeth the dropsy; the powder, taken for three days together in the decoction of pennyroyal, expelleth the dead birth; but, if a piece of the cod or husk, either green or dry, be put into the womb after delivery, it will make them barren for ever after; but the powder, taken for four or five days fasting, with a little fennel-seed, will ease all pains of the mother. The same also made up with a little powder of gentian and oil of bays into a pessary, with some cotton-wool, doth bring down the courses; the same, mixed with a lochoch or electuary for the cough, helpeth an old inveterate cough; being mixed with honey and applied to the throat, it helpeth the quinsy; and made up with a little pitch or turpentine, and laid upon any hard knots or kernels in any part of the body, it will dissolve them, and not suffer any more to grow there; and, being mixed with nitre and applied, it takes away the morpew, and all freckles spots, marks, and discolourings, of the skin; applied with hens-grease, it dissolveth all cold imposthumes and carbuncles; and, mixed with sharp vinegar, it dissolves the hardness

of the spleen : mixed with *unguentum de alabaſtro*, and the reins of the back anointed therewith, it will take away the ſhaking-fits of agues ; a plaſter made thereof, with the leaves of tobacco, will heal the ſting or biting of any venomous beaſts.

The decoction of the huſks themſelves, made with water, and the mouth gargled therewith, helpeth the tooth-ach, and preſerveth the teeth from rottenneſs ; the aſhes of them being rubbed on the teeth, will cleanſe them, and make them look white. The decoction of them in wine helpeth the *hernia ventroſa*, or watery rupture, if applied warm morning and evening : if put to ſteep for three days together in aqua-vitæ, it helpeth the palsy, the place affected being bathed therewith ; and, ſteeped for a day in wine and two ſpoonfuls drunk thereof every day faſting, it is of ſingular ſervice in rendering ſtinking breath ſweet.

P I T C H - T R E E.

NAMES. THIS tree is called in Latin *picea* and *pitis*.

DESCRIPTION. The pitch tree is of an indifferent bigneſs, and tall ſtature, but not ſo great as the pine-tree, and always green, like the pine and fir trees. The timber is fat, and doth yield an abundance of roſin of divers ſorts ; the branches are hard, and parted into other ſprays, moſt commonly croſs-wiſe, upon which grow ſmall green leaves, not round about the branches, but by every ſide, one right over-againſt another, like little feathers ; the fruit is ſmaller than the fruit of the pine-tree. In burning of this tree, there doth iſſue out pitch, as doth alſo out of the pine-tree.

PLACE AND TIME. The pitch-tree grows in many places of Greece, Italy, France, and Germany, and the fruit thereof is ripe in September.

GOVERNMENT AND VIRTUES. The leaves, bark, fruit, kernels, or nuts, of this tree, are almoſt of the ſame nature, virtues, and operations, as the leaves, bark, fruit, and kernels, of the pine-tree.

The Roſin that cometh out of the Pine or Pitch Trees.

Out of the pine and pitch trees riſe three ſorts of roſin, beſides the pitch and tar :

1. The one floweth out by force of the heat of the ſun in ſummer, from the wood or timber where it is broken or cut.
2. The other is found both upon and between the bark of the pine and pitch tree, and moſt commonly in ſuch parts thereof as are cut or any otherwiſe impaired.
3. The third kind groweth betwixt the ſcales of the fruit.

NAMES. All the kinds of roſin are called in Latin *refina*, in French *refine*, and in Dutch, *kerſt*. The firſt kind is called *refina liquida*, and *refina pini* ; of this ſort is alſo
the

the rosin which is molten with the sun in summer, and remaineth dry, and may be made into powder, which some call *resina arida*, or dry rosin.

The second kind is called in Latin *resina arida*; that which sweateth out of the pine tree is called *resina pinea*, and that which cometh out of the pitch-tree *resina picea*. The third kind is called *resina strobilina*.

GOVERNMENT AND VIRTUES. All the rosins are solar, and of an hot and dry temperature, and of a scouring and cleansing nature. Rosin doth cleanse and heal fresh wounds, and therefore is a principal ingredient in all ointments and plasters that serve for that purpose. It softneth hard swellings, and is comfortable to bruised parts or members, being applied, or laid to, with oils, ointments, or plasters, appropriated to that use.

P I T C H A N D T A R.

KINDS AND NAMES. THERE are two sorts of pitch: the one moist, called liquid pitch, the other is hard and dry: they do both run out of the pine and pitch tree, and out of certain other trees, as the cedar, turpentine, and larch, trees, by burning of the wood and timber of them. Pitch is called in Latin *pix*, in French *poix*, in Dutch *peck*. The liquid pitch is called in Latin *pix liquida*, in Brabant *teer*, and in English *tar*. The dry pitch is called in Latin *pix arida*, and *navalis*; in English ship-pitch or stone-pitch; in Dutch *steen-peck*.

GOVERNMENT AND VIRTUES. The pitch and tar are both solar, hot and dry in the second degree, and of subtile parts, but the stone-pitch is the driest; the liquid pitch or tar is the hotter and of more subtile parts. Liquid pitch, taken with honey, doth cleanse the breast, and is good to be licked in by those that are troubled with shortness of breath, whose inside is clogged with corrupt matter. It mollifieth and bringeth to perfection all hard swellings, and is good to anoint the neck against the squinancy or swelling of the throat: it is good to be put into mollifying plasters, anodynes to take away pains, and maturatives, or ripening medicines: being applied with barley-meal, it softneth the hardness of the matrix and fundament; liquid pitch mingled with *sulphur vivum*, or quick brimstone, represseth fretting ulcers, foul scabs and scurf; and, if some salt be put thereto, it is good to be laid upon the wounds occasioned by the bite or sting of any serpent or viper. It cureth the rifts and cloven chaps that happen to the hands, feet, &c.

The stone-pitch, being pounded very small, with the fine powder of frankincense, healeth hollow ulcers and fistulas, filling them up with flesh: the stone-pitch is not

so strong as the liquid pitch, but is much better, it being more apt to close up the lips of wounds.

POMEGRANATE-TREE.

KINDS AND NAMES. THE pomegranate-tree is distinguished into three kinds; that is, the manured pomegranate bearing fruit, and the greater and lesser wild kind: that first is called *malus punicum* and *malus granata*, and the fruit *malum punicum* and *malum granatum*, because it is supposed that they were brought over, from that part of Africa where old Carthage stood, into that part of Spain which is now called Granada, and from thence called Granatum. The flowers of the manured kind (as Dioscorides saith) are called *citini*; but Pliny calleth the flowers of the wild kind *citinus*, and the flowers of both kinds *balauftium*; but *citinus* is more properly the cup wherein do stand the flowers of both kinds: *balauftium* is with us generally taken for the double flowers of the wild kind only.

DESCRIPTION. The pomegranate-tree bearing fruit, *malus punica sativa*. This tree groweth not great in the warm countries, and, where it is natural, not above seven or eight feet high, spreading into many slender branches, here and there set with thorns, and with many very fair, green, shining, leaves, like the leaves of large myrtle, every one upon a small and reddish footstalk. Among the leaves come forth, here and there, the flowers, which are like bell-flowers, broad at the brims, and smaller at the bottom, being one whole leaf divided at the top into five parts, of an orient crimson colour naturally, but much paler with us, and many veins running through it, with divers threads in the middle, and standing in a brownist hollow cup, or long hard husk: the fruit is great and round, with a hard, smooth, brownish-red, rind; not very thick, but yellowish on the inside, and a crown at the top, stored plentifully with a fine clear liquor or juice, like wine, full of seeds inclosed in skins, and the liquor among them. Sometimes this breaketh the rind as it groweth, which will cause it to rot very soon.

PLACE AND TIME. The manured kinds grow in Spain, Italy, Portugal, and other warm countries; but here in England they are preserved and housed with great care, (yet come not to perfection,) and the wild kind with much more; they seldom flower with us.

GOVERNMENT AND VIRTUES. The sun governs these plants and fruits. Pomegranates are hot and moist, but yet moderate: all the sorts breed good blood, yet do they yield but slender nourishment; they are very helpful to the stomach: those that are sweet are most pleasant, yet they somewhat heat, and breed wind and choler,
and

and therefore they are forbidden in agues ; and those that are four are fit for a hot fainting stomach, stay vomiting, and provoke urine, but are somewhat offensive to the teeth and gums in the eating. The seed within the fruit, and the rind thereof, do bind very forceably, whether the powder or the decoction be taken, and stay casting, the bloody-flux, women's courses, the spitting of blood, and running of the reins, and is said to be good for the dropfy : the flowers work the same effects. This fruit is good against the bite of the scorpion, and stayeth the immoderate longings of women with child ; the decoction of the rind or seeds of the fruit, with a little syrup put to it, is good against the cankers in the mouth and ulcers in any part of the body, and against ruptures ; it also helpeth ulcers in the ears or nose, or rheums in the eyes, being dropped or injected ; it fasteneth loose teeth, destroyeth the flat worms in the body, and helpeth to take away wens. With the rinds of pomegranates, instead of galls, or with galls, is made the best writing-ink, both for blackness and durability.

QUEEN OF THE MEADOWS, OR MEADOW-SWEET.

DESCRIPTION. THE stalks of this are reddish, rising to be three feet high, sometimes four or five feet, having at the joints thereof large winged leaves set on each side of a middle rib, being hard, rough, or rugged, crumpled like elm leaves, having also some smaller leaves with them, (as agrimony hath,) somewhat deeply dented about the edges, of a sad green colour on the upper side, and greyish underneath, of a pretty sharp scent and taste, somewhat like unto burnet ; and a leaf thereof, put into a cup of claret, giveth it a fine relish : at the tops of the stalks and branches stand many tufts of small white leaves thick together, which smell much sweeter than the leaves ; and in their places, being fallen, come crooked and cornered seed. The root is somewhat woody, and blackish on the outside, and brownish within, with divers greater strings and lesser fibres set thereat, of a strong scent, but not so pleasant as the flowers and leaves ; it abideth many years, shooting forth anew every spring.

PLACE. It grows in moist meadows, or near the courses of water.

TIME. It flowereth in some place or other all the three summer months, viz. June, July, and August ; and the seed is ripe quickly after.

GOVERNMENT AND VIRTUES. Venus claims dominion over this herb. It is used to stay all manner of bleedings, fluxes, vomitings, and women's courses, as also their whites : It is said to take away the fits of quartan agues, and to make a merry heart, for which purpose some use the flowers, and some the leaves. It speedily helpeth

those that are troubled with the cholic, being boiled in wine ; and, with a little honey, taken warm, it openeth the belly : but, boiled in red wine and drunk, it stayeth the flux of the belly. Being outwardly applied, it healeth old ulcers that are cancerous or eaten, or hollow and fistulous, for which it is by many much commended, as also for sores in the mouth or secret parts. The leaves, when they are full grown, being laid upon the skin, will in a short time raise blisters thereon. The water thereof helpeth the heat and inflammation of the eyes.

QUINCE-TREE.

DESCRIPTION. THE ordinary quince-tree groweth often to the height and bigness of an apple-tree, but more usually lower, and crooked, with a rough bark, and spreading branches far abroad. The leaves are somewhat like those of the apple-tree, but thicker, broader, and fuller of veins, and whiter on the under side, not dented at all about the edges. The flowers are large and white, sometimes dashed over with a blush. The fruit, when ripe, is yellow, and covered with a white frieze or cotton, thick set on the younger, and growing less as they grow to be thorough ripe, bunched out oftentimes in some places, some being like an apple, and some a pear, of a strong heady scent, not durable to keep, and is sour, harsh, and of an unpleasant taste, to eat fresh ; but, being scalded, roasted, baked, or preserved, becomes more pleasant.

PLACE AND TIME. It thrives and grows best near the water-side, and is common throughout Great Britain ; it flowereth not until the leaves come forth. The fruit is ripe in September or October.

GOVERNMENT AND VIRTUES. Old Saturn owns the tree: Quinces, when they are green, help all sorts of fluxes in man or woman, and cholerick lasks, castings, and whatsoever needeth astringent, more than any way prepared by fire : yet the syrup of the juice, or the conserve, is rather opening, much of the binding quality being consumed by the fire ; and, if a little vinegar be added, it stirreth up the languishing appetite, and strengtheneth the stomach ; some spices being added, it comforteth and cheereth the decayed and fainting spirits, and helpeth the liver when oppressed so that it cannot perfect the digestion ; and correcteth choler and flegm. If you would have them purging, put honey to them instead of sugar ; and, if more laxative, for choler, rhubarb ; for flegm, turbith ; for watery humours, scammony : but, if more forcibly to bind, use the unripe quinces, with roses, acacia, or hypocistis, and some torried rhubarb. To take the crude juice of quinces is held a preservative against the force of deadly poison ; for it hath been found most true, that the very smell of a quince

a quince hath taken away all the strength of the poison of white hellebore. If there be need of any outward binding and cooling of any hot fluxes, the oil of quinces, or other medicines that may be made thereof, are very available to anoint the belly or other parts. It likewise strengtheneth the stomach and belly, and the sinews that are loosened by sharp humours falling on them, and restraineth immoderate sweating. The mucilage, taken from the seeds of quinces, and boiled in a little water, is very good to cool the heat, and heal the sore breasts of women. The same with a little sugar is good to lenify the harshness and soreness of the throat, and roughness of the tongue. The cotton or down of quinces, boiled, and applied to plague-sores, healeth them up; and, laid as a plaster, made up with wax, it bringeth hair to them that are bald, and keepeth it from falling off.

QUICK-GRASS.

KINDS AND NAMES. There are several sorts of these grasses, some growing in the fields and other places of the upland grounds, and others near the sea; it is also called dogs-grass, and *gramen caninum*; the other several names shall follow in the descriptions.

DESCRIPTION. 1. Common quick-grass, *gramen caninum vulgare*. This grass creepeth far about under ground, with long white jointed roots, and small fibres almost at every joint, very sweet in taste, as the rest of the herb is, and interlacing one another; from whence shoot forth many fair and long grass leaves, small at the ends, and cutting or sharp at the edges; the stalks are jointed like corn, with the like leaves on them, and a long spiked head, with long husks on them, and hard rough seed in them.

2. Quick-grass with a more spreading panicle, *gramen caninum longius, radicum, and paniculatum*. This differeth very little from the former, but in the tuft, or panicle, which is more spread into branches, with shorter and broader husks; and in the root, which is fuller, greater, and further spread.

3. The lesser quick-grass with a sparfed tuft, *gramen caninum, latiore panicula minus*. This small quick-grass hath slender stalks, about half a foot high, with many very narrow leaves, both below and on the stalks; the tuft, or panicle, at the top, is small according to the plant, and spreadeth into sundry parts, or branches: the root is small and jointed, but creepeth not so much, and has many more fibres than the others have, and is a little browner, but more sweet.

4. Low bending quick-grass, *gramen caninum, arvense*. This creepeth much under ground, but in a different manner, the stalk taking root in divers places, and scarce rising

rising a foot high; with such-like green leaves as the ordinary, but shorter; the spiked head is bright, and spreadeth abroad somewhat like the field-grafs.

5. *Gramen caninum supinum monspeliense*. This differeth very little from the last, in any other part thereof than in the panicle, or spiked head; which is longer, and not spread or branched into parts as that is.

6. A small sweet grafs like quick-grafs, *gramen exile tenuifolium, canariæ simile, sive gramen dulce*. This small grafs hath many low creeping branches, rooting at the joints, like the two last; having a number of small and narrow leaves on them, much less than they; and a small sparsed panicle, somewhat like the red dwarf-grafs.

7. Wall-grafs with a creeping root, *gramen murorum radice repente*. This wall-grafs, from a blackish creeping root, springeth forth with many stalks a foot high, bending or crooking with a few narrow short leaves on them, at whose tops stand small white panicles, of an inch and a half long, made of many small chaffy husks.

PLACE AND TIME. The first is usual and common in divers plowed grounds and gardens, where it is often more bold than welcome, troubling the husbandmen as much after the plowing up of some of them, (as, to pull up the rest after the springing, and, being raked together, to burn them,) as it doth gardeners, where it happeneth, to weed it out from amongst their trees and herbs; the second and third are more scarce, and delight in sandy and chalky grounds; the three next are likewise found in fields that have been plowed and do lie fallow; and the last is often found on old decayed walls in divers places; they flourish in the beginning of summer.

GOVERNMENT AND VIRTUES. These are plants of Mercury. The root is of temperature cold and dry, and hath a little mordacity in it, and some tenuity of parts; the herb is cold in the first degree, and moderate in moisture and driness; but the seed is much more cold and drying. This quick-grafs is most medicinal of all other sorts of graffes: it is effectual to open obstructions of the liver and spleen, and the stoppings of urine; the decoction thereof being drunk, and to ease the griping pains in the belly, and inflammations, and wasteth the excrementitious matter of the stone in the bladder, and the ulcers thereof; also the root, being bruised and applied, doth knit together and consolidate wounds: the seed doth more powerfully expel urine, bindeth the belly, and stayeth vomiting the distilled water is good to be given to children for the worms.

RADISH AND HORSE-RADISH.

THE garden radish is so well known that it needeth no description.

DESCRIPTION. The horse-radish hath its first leaves rising before winter, about a foot and a half long, very much cut in or torn on the edges into many parts, of a

dark green colour, with a great rib in the middle ; after those have been up a while, others follow, greater, rougher, broader, and longer, whole, and not divided as the first, but only somewhat roundly dented about the edges. The stalk, when it beareth flowers, (which is but seldom,) is great, rising up with some few smaller leaves thereon to three or four feet high, spreading at the top many small branches of white flowers, of four leaves each ; after which come small pods, like those of shepherds purse, but seldom with any seed in them. The root is large, long, white, and rugged, shooting up divers heads of leaves ; but it doth not creep within ground, nor run above ground, and is of a strong, sharp, and bitter, taste, almost like mustard.

PLACE. It is found wild in some places in England, but is chiefly planted in gardens where it thrives in moist and shadowy places.

TIME. It flowereth but seldom, but, when it doth, it is in July.

GOVERNMENT AND VIRTUES. They are both under Mars. The juice of horse-radish, given to drink, is held to be very effectual for the scurvy. It killeth the worms in children, being drunk, and also laid upon the belly. The root bruised, and laid to the place grieved with the sciatica, joint-ach, or the hard swellings of the liver and spleen, doth wonderfully help them all. The distilled water of the herb and roots is more commonly taken with a little sugar for all the purposes aforesaid.

Garden radishes are eaten as fallad, but they breed humours in the stomach, and corrupt the blood ; yet, for such as are troubled with the gravel, stone, or stoppage of urine, they are good physick, if the body be strong that takes them ; the juice of the roots may be made into a syrup for that use : they purge by urine exceedingly.

Sleep not presently after the eating of radish, for that will cause a stinking breath.

R A G W O R T.

IT is called St. James-wort, stagger-wort, flammer-wort, and seggrum.

DESCRIPTION. The greater common ragwort hath many large and long dark green leaves lying on the ground, very much rent and torn on the sides into many pieces ; from among which rise up sometimes one and sometimes two or three square or crested blackish stalks three or four feet high, sometimes branched, bearing divers such-like leaves upon them at several distances unto the tops, where it brancheth forth into many stalks bearing yellow flowers, consisting of a number of leaves set as a pale, or border, with a dark yellow thrum in the middle, which at last turn into down, and, with the small blackish gray seed, are carried away with the wind. The root is made of many fibres, whereby it is firmly fastened into the ground, and abideth many years.

There is another sort hereof different from the former only in this, that it riseth not so high ; the leaves are not so finely jagged, nor of so dark a green colour, but rather whitish, soft, and woolley, and the flowers usually paler.

PLACE. They both grow wild in pastures and untilled grounds in many places, and oftentimes both of them in one field.

TIME. They flower in June and July, and the seed is ripe in August.

GOVERNMENT AND VIRTUES. Ragwort is under the command of Venus, and cleanseth, digesteth, and discusseth. The decoction of this herb is good for ulcers in the mouth or throat, and for swellings, hardness, or imposthumations, for it thoroughly cleanseth and healeth them ; as also the quinsy and the king's evil. It helpeth to stay catarrhs, thin rheum, and defluxions from the head into the eyes, nose, or lungs. The juice is found by experience to be good to heal green wounds, and to cleanse and heal old and filthy ulcers ; as also inward wounds and ulcers, and stayeth the malignity of fretting or running cancers, and hollow fistulas, not suffering them to spread further. It is also much commended to help aches and pains, either in the fleshy parts, or in the nerves and sinews ; as also the sciatica, or pain of the hips. Bathe the places with the decoction of the herb, or anoint them with an ointment made of the herb bruised and boiled in hogs-lard, with mastic and olibanum in powder added to it after it is strained. In Suffex this herb is called ragwood.*

RATTLE - GRASS.

OF this there are two kinds, the red and the yellow.

DESCRIPTION. The common red rattle-grass hath sundry reddish hollow stalks, and sometimes green, rising from the root, lying for the most part on the ground, yet some growing more upright, with many small reddish or greenish leaves set on both sides of a middle rib finely dented about the edges : the flowers stand at the tops of the stalks and branches, of a fine purplish red colour ; after which come flat blackish seed in small husks, which, lying loose therein, will rattle with shaking. The root consists of two or three small whitish strings, with some fibres thereat.

The common yellow rattle hath seldom above one round green stalk, rising from the root, about half a yard or two feet high, and but few branches thereon, having two long and somewhat broad leaves set at a joint, deeply cut in on the edges, resembling the comb of a cock, broadest next the stalk. The flowers grow at the tops of

* Externally it has been praised with good reason against swellings, and in inflammations : they are to be boiled to softness, and applied as a warm poultice, with bread and oil.

the stalks, with some shorter leaves with them, hooded after the same manner as the others, but many of a fair yellow colour, in some paler, in some whiter. The seed is contained in large husks; the root is smaller and slender, perishing every year.

PLACE. They grow in meadows and woods generally, throughout England.

TIME. They are in flower from Midsummer till August.

GOVERNMENT AND VIRTUES. They are both under the dominion of the Moon. The red rattle is reckoned good to heal fistulas and hollow ulcers, and to stay the flux of humours to them, or any other flux of blood, being boiled in red or white wine and drunk.

The yellow rattle, or cocks-comb, is held to be good for those that are troubled with a cough, or dimness of sight; if the herb, being boiled with beans, and some honey put thereto, be drunk, or dropped into the eyes, it draweth forth any skin, dimness, or film, from the sight, without trouble or pain.

REST-HARROW, OR CAMMOAK.

DESCRIPTION. COMMON rest-harrow riseth up with divers rough woody twigs, two or three feet high, set at the joints without order, with a little-roundish leaves, sometimes more than two or three at a place, of a dark green colour, without thorns while they are young, but afterwards armed in sundry places with short and sharp thorns. The flowers come at the tops of the twigs and branches, whereof it is full, fashioned like pease, or bloom blossoms, but smaller, flatter, and somewhat close, of a faint purplish colour: after which come small pods, containing small, flat and round, seed. The root is blackish on the outside, and whitish within: very rough and hard to break when it is fresh and green, and as hard as an horn when it is dried, thrusting down deep into the ground, and spreading likewise, every piece being likely to grow again if it be left in the ground.

PLACE. It groweth in many places of Great Britain, as well in arable as in waste ground.

TIME. It flowereth in general about the beginning or middle of July, and the seed is ripe in August.

GOVERNMENT AND VIRTUES. It is under the dominion of Mars. It is good to provoke urine and to break and expel the stone, which the powder of the bark of the root taken in wine performs effectually. Mathiolus saith, the same helpeth the disease called hernia carnofa, the fleshy rupture, by taking the said powder for some months together constantly, and that it hath cured some which seemed incurable by any other means than by cutting or burning. The decoction thereof, made with some vinegar, and gargled in the mouth, caseth the tooth ach, especially when it
comes

comes of rheum; and is very powerful to open obstructions of the liver and spleen, and other parts. A distilled water, made in balneo mariæ with four pounds of the roots hereof, first sliced small, and afterwards steeped in a gallon of Canary wine, is very good for all the purposes aforesaid, and to cleanse the passages of the urine. The powder of the said root made into an electuary or lozenges with sugar, as also the bark of the fresh roots boiled tender, and afterwards beaten into a conserve with sugar, worketh the like effect. The powder of the roots, strewed upon the brims of ulcers, or mixed with any other convenient thing and applied, consumeth the hardness, and causeth them to heal the better.

R O C K E T.

AS the garden-rocket is rather used as a sallad-herb than to any physical purposes, I shall omit it, and only speak of the common wild rocket.

DESCRIPTION. The common wild rocket hath longer and narrower leaves, much more divided into slender cuts and jags on both sides of the middle rib than the garden kinds have, of a sad green colour, from among which riseth up divers stiff stalks, two or three feet high, sometimes set with the like leaves, but smaller, and much less upwards, branched from the middle into sundry stalks, bearing yellow flowers of four leaves each, as the others are, which afterwards yield small reddish seed, in small long pods, of a more bitter and hot biting taste than the garden kinds, as are the leaves likewise.

PLACE. It is found wild in most places of Great Britain.

TIME. It flowereth about June and July, and the seed is ripe in August.

GOVERNMENT AND VIRTUES. The wild rockets are forbidden to be used alone, because their sharpness fumeth into the head, causing ach and pain; and are no less hurtful to hot and choleric persons, for fear of inflaming their blood. Mars rules them. The wild rocket is more strong than the garden kinds; it serveth to help digestion, and provoketh urine exceedingly. The seed is used to cure the bitings of serpents, the scorpion, the shrew-mouse, and other poisons, and expelleth the worms and other noisome creatures that breed in the body. The herb, boiled or stewed, and some sugar put thereto, helpeth the cough in children, being taken often. The seed also, taken in drink, taketh away the ill scent of the arm-pits, increaseth milk in nurses, and wasteth the spleen. The seed, mixed with honey, and used on the face, cleanseth the skin from spots, morpew, and other discolourings; and, used with vinegar, taketh away freckles and redness in the face or other parts; and, with the gall of an ox, it amendeth foul scars, black spots, and the marks of the small-pox.

WINTER

WINTER ROCKET, OR CRESSES.

DESCRIPTION. WINTER rocket, or winter cresses, hath divers somewhat like turnip-leaves, with smaller pieces next the bottom, and broad at the ends, which so abide all winter, (if it spring up in autumn, when it is used to be eaten,) from among which riseth up divers small round stalks full of branches, bearing many small yellow flowers of four leaves each, after which come small long pods with reddish seed in them. The root is rather stringy, and perisheth every year after the seed is ripe.

PLACE. It groweth of its own accord in gardens, and fields, by the way-sides, in divers places.

TIME. It flowereth in May, and seedeth in June, and then perisheth.

GOVERNMENT AND VIRTUES. This is profitable to provoke urine, and helpeth the strangury, and to expel gravel and the stone; it is also of good effect in the scurvy. It is found by experience to be a good herb to cleanse inward wounds; the juice or decoction, being drunk, or outwardly applied to wash foul ulcers and sores, cleanse them by sharpness, and hindereth the dead flesh from growing therein, and healeth them by the drying quality.

R O S E S.

I HOLD it needless to trouble the reader with a description of these, since both the garden roses and the wild roses of the fields are well enough known; take therefore the virtues of them as followeth; and first I shall begin with the garden kinds.

GOVERNMENT AND VIRTUES. Red roses are under Jupiter, damask under Venus, and white under the Moon. The white and the red roses are cooling and drying, and yet the white is taken to exceed the red in both those properties, but is seldom used inwardly in medicine. The bitterness in the roses when they are fresh, especially the juice, purgeth choler and watery humours; but, being dried, and that heat which caused the bitterness being consumed, they have then a binding quality; those also that are not full blown do both cool and bind more than these that are full blown, and the white roses more than the red. The decoction of red roses, made with wine, and used, is very good for the head-ach, and pains in the eyes, ears, throat, and gums, as also for the fundament, the lower bowels, and the matrix. The same decoction, with the roses remaining in it, is profitably applied to the region of the heart to ease the inflammation therein; as also St. Anthony's fire, and other diseases of the stomach. Being dried and beaten to powder, and taken into steeled wine or water, it helpeth to stay women's courses. The yellow threads in the middle of the red roses.

(which are erroneously called the rose seed), being powdered, and drunk, in the distilled water of quinces, stayeth the defluxion of rheum upon the gums and teeth, preserving them from corruption, and fasteneth them if they be loose, being washed and gargled therewith, and some vinegar of squills added thereto. The heads, with the seed, being used in powder, or in a decoction, stay the lask and spitting of blood. Red roses do strengthen the heart, stomach, and liver, and the retentive faculty; they mitigate the pains that arise from heat, assuage inflammations, procure rest and sleep, stay running of the reins and fluxes of the belly; the juice of them doth purge and cleanse the body from choler and phlegm. The husks of the roses, with the beards and nails, are binding and cooling, and the distilled water of either of them is good for heat and redness in the eyes, and to stay and dry up the rheums and watering of them. Of the red roses are usually made many compositions, all serving to sundry good uses, viz. electuary of roses; conserve, both moist and dry, which is more usually called sugar of roses; syrup of dried roses, and honey of roses; the cordial powder called *diarrhodon abbatis* and *aromatica rosarum*; the distilled water of roses, vinegar of roses, ointment and oil of roses, and the rose-leaves dried, which, although no composition, is yet of very great use and effect. The electuary is purging, whereof two or three drachms taken by itself in some convenient liquor is a purge sufficient for a weak constitution; but may be increased to six drachms, according to the strength of the patient. It purgeth choler without trouble, and is good in hot fevers, and pains of the head arising from hot cholerick humours and heat in the eyes, the jaundice also, and joint-achs proceeding of hot humours. The moist conserve is of much use, both binding and cordial; for, until it be about two years old, it is more binding than cordial, and after that more cordial than binding: some of the younger conserve, taken with *mitbridatum*, mixed together, is good for those that are troubled with distillations of rheum from the brain to the nose, and defluxions of rheum into the eyes, as also for fluxes and lasks of the belly; and, being mixed with the powder of mastic, is very good for the running of the reins, and for the looseness of humours in the body. The old conserve, mixed with *aromaticum rosarum*, is a very good cordial against faintings, swoonings, weakness, and tremblings of the heart, strengthening both it and a weak stomach, helpeth digestion, stayeth casting, and is very good preservative in the time of infection. The dry conserve, which is called sugar of roses, is a very good cordial to strengthen the heart and spirits, as also to stay defluxions: The syrup of dried red roses strengtheneth a stomach given to casting, cooleth an over-heated liver, comforteth the heart, resisteth putrefaction and infection, and helpeth to stay lasks and fluxes. Honey of roses is much used in gargles and lotions, to wash sores, either in the mouth, throat,

or other parts, both to heal them and to stay the fluxes of humours falling upon them; it is also used in clisters. The cordial powders, called *diarrhodon abbatis* and *aromaticus rosarum*, do comfort and strengthen the heart and stomach, procure an appetite, help digestion, stop vomiting, and are very good for those that have slippery bowels, to strengthen them and to dry up their moisture. Red-rose water is of well-known and familiar use in all occasions, (and better than damask-rose water,) being cooling and cordial, quickening the weak and faint spirits, used either in meats or broths, to wash the temples, to smell to at the nose, or to smell the sweet vapours thereof out of a perfuming pot, or cast on a hot fire-shovel; it is also of good use against the redness and inflammations of the eyes, to bathe them therewith, and the temples of the head also against pain and ach, for which purpose also vinegar of roses is of great service, and to procure rest and sleep, if some thereof and rose water together be used to smell to, or the nose and temples moistened therewith, but more usually to moisten a piece of red-rose cake cut fit for the purpose, and heated between a double-folded cloth, with a little beaten nutmeg, and poppy-seed strewed on the side that must lie next to the forehead and temples, and bound thereto all night. The ointment of roses is much used against heat and inflammations in the head, to anoint the forehead and temples, and, being mixed with *unguentum populeon*, to procure rest; it is also used for the heat of the liver, of the back and reins, and to cool and heal pusses, wheals, and other red pimples rising in the face or other parts. Oil of roses is not only used by itself to cool any hot swellings or inflammations, and to bind and stay fluxes of humours unto sores, but is also put into ointments and plasters that are cooling and binding, to restrain the flux of humours. The dried leaves of the red roses are used both inwardly and outwardly, being cooling, binding, and cordial; for with them are made both *aromaticum rosarum*, *diarrhodon abbatis*, and *saccharum rosarum*, each of whose properties are before declared. Rose-leaves and mint, heated and applied outwardly to the stomach, stay castings, and very much strengthen a weak stomach; and, applied as a fomentation to the region of the liver and heart, do much cool and temper them, and also serve instead of a rose-cake, to quiet the over-hot spirits and cause rest and sleep. The syrup of damask-roses is both simple and compound, and made with agaric. The simple solutive syrup is a familiar, safe, gentle, and easy, medicine, purging choler, taken from one ounce to three or four; yet this is remarkable herein, that the distilled water of this syrup should notably bind the belly. The syrup with agaric is more strong and effectual, for one ounce thereof by itself will open the body more than the other, and worketh as much on phlegm as choler. The compound syrup is more forcible in working on melancholy

melancholy humours, and against the leprosy, itch, tetters, &c. and the French disease. Also honey of roses solutive is made of the same infusions that the syrup is made of, and therefore worketh the same effect both opening and purging, but is oftener given to phlegmatic than choleric persons, and is more used in clifters than in potions, as the syrup made with sugar is. The conserve and preserved leaves of these roses are also operative in gently opening the belly.

The simple water of the damask-roses is chiefly used for fumes to sweeten things, as the dried leaves thereof to make sweet powders and fill sweet bags. The wild roses are few or none of them used in phyfic, but yet are generally held to come near the nature of the manured roses. The fruit of the wild brier, which are called hops, being thoroughly ripe, and made into a conserve with sugar, besides the pleasantness of the taste, doth gently bind the belly, and stay defluxions from the head upon the stomach, drying up the moisture thereof, and helpeth digestion. The brier-ball is often used, being made into powder and drunk, to break the stone, provoke urine when it is stopped, and to ease and help the cholic. In the middle of these balls are often found certain white worms, which, being dried, and made into powder, and some of it drunk, is found, by experience of many, to kill and void the worms of the belly.

ROSA SOLIS, OR SUN-DEW.

DESCRIPTION. IT hath divers small round hollow leaves, somewhat greenish, but full of certain red hairs, which makes them seem red, every one standing upon his own footstalks, reddish hairy likewise. The leaves are continually moist in the hottest day, for the hotter the sun shines on them the moister they are, with a certain sliminess, the small hairs always holding this moisture. Among these leaves rise up small slender stalks, reddish also, three or four fingers high, bearing divers small white knobs one above another, which are the flowers; after which, in the heads, are contained small seeds: the root is a few small hairs.

PLACE. It groweth usually in bogs and in wet places, and sometimes in moist woods and meadows.

TIME. It flowereth in June, and then the leaves are fittest to be gathered.

GOVERNMENT AND VIRTUES. The Sun rules it, and it is under the sign Cancer. Rosa solis is accounted good to help those that have salt rheum distilling on their lungs, which breedeth a consumption, and therefore the distilled water thereof in wine is held fit and profitable for such to drink, which water will be of a gold yellow colour: the same water is held to be good for all other diseases of the lungs; as phthisics, wheezing, shortness of breath, or the cough; as also to heal the ulcers
that

that happen in the lungs, and it comforteth the heart and fainting spirits ; the leaves outwardly applied to the skin will raise blisters, which hath caused some to think it dangerous to be taken inwardly. There is an usual drink made hereof, with *aqua vite* and spices, frequently, and without any offence or danger, but to good purpose, used in qualms and passions of the heart.

R O S E M A R Y.

OUR garden rosemary is so well known, that I need not describe it.

TIME. It flowereth in April and May with us, and sometimes again in August.

GOVERNMENT AND VIRTUES. The Sun claims privilege in it, and it is under the celestial Ram. It is an herb of as great use with us as any whatsoever, not only for physical, but civil, purposes. The physical use of it (being my present task) is very much both for inward and outward diseases ; for, by the warming and comforting heat hereof, it helpeth all cold diseases, both of the head, stomach, liver, and belly. The decoction thereof in wine helpeth the cold distillations of rheum into the eyes, and all other cold diseases of the head and brain, as the giddiness or swimming therein, drowsiness, or dulness of the mind and senses, the dumb palsy, or loss of speech, the lethargy, and falling-sickness, to be both drunk and the temples bathed therewith. It helpeth the pains in the gums and teeth, by rheum falling into them, or, by putrefaction, causing an evil smell from them, or a stinking breath. It helpeth a weak memory, and quickeneth the senses. It is very comfortable to the stomach in all the cold griefs thereof, helping digestion, the decoction or powder being taken in wine. It is a remedy for wind in the stomach or bowels, and expelleth it powerfully, as also wind in the spleen. It helpeth those that are liver-grown, by opening the obstructions thereof. It helpeth dim eyes, and procureth a clear sight, the flowers thereof being taken, all the while it is flowering, every morning fasting, with bread and salt. Both Dioscorides and Galen say, that, if a decoction be made thereof with water, and they that have the yellow jaundice do exercise their bodies presently after the taking thereof, it will certainly cure them. The flowers, and the conserve made of them, are good to comfort the heart, and to expel the contagion of the pestilence ; to burn the herb in houses and chambers correcteth the air in them. The dried leaves, smoked, help those that have a cough, phthisic, or consumption, by warming and drying the thin distillations which cause those diseases. The leaves are much used in bathings, and, made into ointments or oils, are good to help cold benumbed joints, sinews, or members. The chymical oil, drawn from the leaves and flowers, is a sovereign help for all diseases aforesaid, touching the temples and nostrils with

two or three drops, for all the diseases of the head and brain spoken of before; as also to take a drop, two, or three, as the cause requireth, for the inward griefs: yet must it be done with discretion, for it is very quick and piercing, and therefore but a very little must be taken at a time. There is also another oil made in this manner: take what quantity you will of the flowers, and put them into a strong glass close stopped, tie a fine linen cloth over the mouth, and turn the mouth down into another strong glass, which being set in the sun, an oil will distil down into the lower glass, to be preserved as precious for divers uses, both inward and outward, as a sovereign balm to heal the diseases before-mentioned, to clear a dim sight, and to take away spots, marks, and scars, in the skin. This herb is good for a dull and melancholy man to make use of; for, if they take the flowers, and make them into powder, and bind them on the right arm in a linen cloth, this powder, by working on the veins, will make a man more merry than ordinary.

R H U B A R B, OR R H A P O N T I C.

THOUGH the name may speak it foreign, yet it grows with us in England, and that frequently enough, in our gardens; and is nothing inferior to that which is brought us out of China; take therefore a description at large of it, as followeth.

DESCRIPTION. At the first appearing out of the ground, when the winter is past, it hath a great round brownish head, rising from the middle or sides of the root, which openeth itself into sundry leaves one after another, very much crumpled or folded together at the first, and brownish; but afterwards it spreadeth itself, and becometh smooth, very large, and almost round, every one standing on a brownish stalk, of the thickness of a man's thumb when they are grown to their fulness, and most of them two feet and more in length, especially when they grow in any moist or good ground; and the stalk of the leaf also, from the bottom thereof to the leaf itself, is about two feet; the breadth thereof from edge to edge, in the broadest place, is also two feet; of a sad or dark green colour, of a fine tart or sourish taste, much more pleasant than the garden or wood sorrel. From among these riseth up sometimes, but not every year, a strong thick stalk, not growing so high as the patience, or garden-dock, with such round leaves as grow below, but smaller at every joint up to the top, and among the flowers, which are white, spreading forth into many branches, and consisting of five or six small white leaves each, after which come brownish three-square seed, like unto other docks, but larger. The root groweth in time to be very great, with divers great spreading branches from it, of a dark brownish or reddish colour on the outside, with a pale yellow skin under it, which covereth the inner substance

substance or root; which rind and skin being pared away, the root appeareth of so fresh and lively a colour, with fresh-coloured veins running through it, that the choicest of that rhubarb that is brought us from beyond the seas cannot excel it: which root, if it be dried carefully, and as it ought, (which must be in our country by the gentle heat of a fire, in regard the sun is not hot enough here to do it,) and every piece kept from touching one another, will hold its colour almost as well as when it is fresh; and hath been approved of, and commended, by those who have oftentimes used it.

PLACE. It groweth in gardens, and flowereth about the beginning or middle of June, and the seed is ripe in July.

TIME. The roots, that are to be dried and kept all the year following, are not to be taken up before the stalk and leaves be quite withered and gone, and that is not until the middle or end of October; and, if they be taken a little before the leaves do spring, or when they are sprung up, the roots will not have so good a colour in them.

GARDEN PATIENCE, OR MONKS RHUBARB.

DESCRIPTION. THIS is a dock, bearing the name of rhubarb for some purging quality therein, and groweth up with large tall stalks, set with somewhat broad and long fair green leaves, not dented. The tops of the stalks, being divided into many small branches, bear reddish or purplish flowers, and three-square seed, like unto other docks. The root is long, great, and yellow, like unto the wild docks, but a little redder, and, if it be a little dried, sheweth less discoloured veins than the next doth when it is dry.

GREAT ROUND-LEAVED DOCK, OR BASTARD-RHUBARB.

DESCRIPTION. THIS hath divers large, round, thin, yellowish green leaves, rising from the root, a little waved above the edges, every one standing on a thick and long brownish foot-stalk; from among which riseth up a pretty big stalk, about two feet high, with some such-like leaves growing thereon, but smaller; at the top whereof stand, in a long spike, many small brownish flowers, which turn into hard three-square shining brown seed, like the garden patience before described. This root grows larger, with many branches of great fibres, yellow on the outside, and somewhat pale yellow within, with some discoloured veins, like the rhubarb first described, but much less, especially when it is dry.

PLACE AND TIME. These also grow in gardens; they flower in June, and the seed is ripe in July.

GOVERNMENT AND VIRTUES. Mars claims predominancy over all the wholesome herbs: a drachm of the dried root of monks rhubarb, with a scruple of ginger, made into powder, and taken fasting in a draught or mefs of warm broth, purgeth choler and phlegm downwards, very gently and safely, without danger: the seed thereof, contrarily, doth bind the belly, and helpeth to stay any sort of lask or bloody flux. The distilled water thereof is very profitably used to heal scabs, as also foul ulcerous sores, and to allay the inflammation of them: The juice of the leaves or roots, or the decoction of them in vinegar, is used as a most effectual remedy to heal scabs and running sores.

The bastard-rhubarb hath all the properties of the monks rhubarb, but is more effectual for both inward and outward diseases. The decoction thereof, with vinegar, dropped into the ears, taketh away the pains; gargled in the mouth, taketh away the tooth-ach; and, being drunk, healeth the jaundice. The seed thereof easeth the gnawing and griping pains of the stomach, and taketh away loathing. The root thereof helpeth the ruggedness of the nails, and, being boiled in wine, helpeth the swelling of the throat, commonly called the King's evil, as also the swellings of the kernels of the ears. It helpeth them that are troubled with the stone, provoketh urine, and helpeth the dimness of the sight. The roots of this bastard-rhubarb are used in opening and purging diet-drinks with other things to open the liver, and to cleanse and cool the blood.

The properties of that which is called the English rhubarb are the same with the former, but much more effectual, and hath all the properties of the true Indian rhubarb, except the force in purging, wherein it is but of half the strength thereof, and therefore a double quantity must be used; it likewise hath not that bitterness and astringency; in other things it worketh almost in an equal quality, which are these: it purgeth the body of choler and phlegm, being either taken of itself, made into powder and drunk in a draught of white wine, or steeped therein all night, and taken fasting, or put among other purges, as shall be thought convenient, cleansing the stomach, liver, and blood, opening obstructions, and helping those griefs that come thereof; as the jaundice, dropsy, swelling of the spleen, tertian and day agues, and pricking pain in the sides; and also it stayeth spitting of blood. The powder, taken with cassia dissolved, and a little Venice turpentine, cleanseth the reins, and strengtheneth them, and is very effectual to stay the running of the reins. It is also given for the pains and swellings in the head, for those that are troubled with melancholy, and helpeth

helpeth the gout and the cramp. The powder of rhubarb, taken with a little mummia and madder-roots, in some red wine, dissolveth clotted blood in the body, happening by any fall or bruise, and healeth burstings and broken parts as well inward as outward; the oil, likewise, wherein it hath been boiled, worketh the like effects; it is used to heal those ulcers that happen in the eyes and eye-lids, being steeped and strained; as also to assuage swellings and inflammations; and, applied with honey, or boiled in wine, it taketh away all black and blue spots or marks. Whey or white wine are the best liquors to steep it in, and thereby it worketh more effectually in opening obstructions, and purging the stomach and liver.

M E A D O W R U E*.

DESCRIPTION. MEADOW RUE riseth up with a yellow stringy root, much spreading in the ground, and shooting forth new sprouts round about, with many herby green stalks, two feet high, crested, set with joints here and there, and many large leaves on them below, being divided into smaller leaves, nicked or dented in the fore part, of a sad green colour on the upper side, and pale green underneath. Toward the top of the stalk there shooteth forth divers short branches, on every one whereof there stand two, three, or four, small round heads or buttons, which breaking, the skin that incloseth them shows forth a tuft of pale greenish-yellow threads; which falling away, there come in their places small three-cornered cods, wherein is contained small, long, and round, seed. The plant hath a strong unpleasant smell.

PLACE. It groweth in many places in England, in the borders of moist meadows, and by ditch sides:

TIME. It flowereth about July, or the beginning of August.

GOVERNMENT AND VIRTUES. Dioscorides saith, that this herb, bruised and applied, perfectly healeth old sores: and the distilled water of the herb and flowers doth the like. It is used by some, among other pot-herbs, to open the body; but the roots washed clean, boiled in ale, and drunk, are more opening than the leaves. The root, boiled in water, and the places of the body most troubled with vermin or lice washed therewith, while it is warm, destroyeth them utterly. In Italy it is used against the plague, and in Saxony against the jaundice.

* Pliny writeth, that there is such friendship between it and the fig-tree, that it prospereth no where so well as under that tree, and delighteth to grow in sunny places. It is an enemy to the toad, as being a great enemy to poison. The ancient astrologers declare this herb hath a property of making a man chaste; but a woman it fills with lust.

G A R D E N R U E.

GARDEN RUE is so well known, both by this name and the name Herb of Grace, that I shall not write any description of it, but shall only shew the virtues of it as followeth :

GOVERNMENT AND VIRTUES. It is an herb of the Sun, and under Leo. It provoketh urine, being taken either in meat or drink. The seed thereof, taken in wine, is an antidote against all dangerous medicines or deadly poisons. The leaves taken either by themselves, or with figs and walnuts, is called Mithridates's counter-poison against the plague, and causeth all venomous things to become harmless. Being often taken in meat or drink, it abateth venery, and destroyeth the ability to beget children. A decoction made thereof, with some dried dill leaves and flowers, easeth all pains, inwardly drunk, and outwardly applied warm to the place grieved. The same, being drunk, helpeth the pains both of the chest and sides, as also coughs and hardness of breathing, the inflammations of the lungs, and the tormenting pains of the sciatica and of the joints, being anointed or laid to the places, as also the shaking fits of agues by taking a draught before the fit. Being boiled or infused in oil, it is good to help the wind cholic ; it killeth and driveth forth the worms of the belly, if it be drunk after it is boiled in wine to the half with a little honey. It helpeth the gout or pains in the joints of hands, feet, or knees, applied thereunto : and with figs it helpeth the dropsy, being bathed therewith ; being bruised, and put into the nostrils, it stayeth the bleeding thereof. It taketh away wheals and pimples, if, being bruised with a few myrtle leaves, it be made up with wax and applied. It cureth the morpew, and taketh away all sorts of warts, if boiled in wine with some pepper and nitre, and the places rubbed therewith ; and, with allum and honey, helpeth the dry scab, or any tetter or ring-worm. The juice thereof, warmed in a pomegranate shell or rind, and dropped into the ears, helpeth the pains of them. The juice of it and fennel, with a little honey, and the gall of a cock put thereto, helpeth the dimness of the eye-sight. An ointment made of the juice thereof, with oil of roses, cerus, and a little vinegar, cureth St. Anthony's fire, and all foul running sores in the head ; and the stinking ulcers of other parts. The antidote used by Mithridates every morning fasting to secure himself from any poison or infection was this : take twenty leaves beaten together into a mass with twenty juniper berries, which is the quantity appointed for every day. Another electuary is made thus : take of nitre, pepper, and cummin seed, of each equal parts ; of the leaves of rue, clean picked, as much in weight as all the other three ; beat them well together, and put to it as much honey as will make it up into an electuary ; (but you must first steep your cummin-seed in vinegar

vinegar twenty-four hours, and then dry it, or rather toast it in a hot fire-shovel, or in an oven; and it is a remedy for the pains or griefs of the cheft or ftomach, of the fpleen, belly, or fides; of the liver, by obftuclions; of the reins and bladder, by the ftopping of urine.

R U P T U R E - W O R T.

DESCRIPTION. THIS spreadeth very many fmall branches round about upon the ground, about a fpan long, divided into many parts, full of fmall joints fet very thick together, whereat come forth two very fmall leaves of a yellowifh green colour, branches and all, where groweth forth alfo a number of exceeding fmall yellowifh flowers, fcarce to be difcerned from the ftalks and leaves, which turn into feeds as fmall as the very duft. The root is very long and fmall, thrufting down deep into the ground. This hath no fmell nor tafte at firft, but afterward hath a little altringent tafte, without any manifefst heat, yet a little bitter and fharp.

PLACE. It groweth in dry, fandey, rocky, places.

TIME. It is frefh and green all the fummer.

GOVERNMENT AND VIRTUES. This herb is under the dominion of Saturn. Rupture-wort hath not its name in vain, for it is found by experience to cure the rupture, not only in children, but alfo in grown perfons, if the difeafe be not too inveterate, by taking a drachm of the powder of the dried herb every day in wine, or the decoction made in wine and drunk, or the juice or diftilled water of the green herb taken in the fame manner; and helpeth all other fluxes either in men or women; vomitings alfo, and the gonorrhea, or running of the reins, being taken any of the ways aforefaid. It doth alfo moft affuredly help thofe that have the ftrangury, or are troubled with the ftone or gravel. The fame alfo much helpeth all fitches in the fide, all griping pains in the ftomach or belly, the obftuclions of the liver, and cureth the yellow jaundice likewife. It killeth alfo the worms in children; being outwardly applied, it heals wounds, and helps defluxions, of rheum from the head to the eyes, nofe, and teeth, being bruifed green and bound thereto. It alfo drieth up the moifture of fiftulous ulcers or any other that are foul and fpredding.

R U S H E S.

ALTHOUGH there are many kinds of rufhes, yet I fhall confine myfelf to thofe which are beft known, and moft medicinal, as the bull-rufhes, and other of the foft and fmoother kinds; which grow fo commonly in almoft every place in Great Bri-

tain, and are so generally noted, that it is needless to write any description of them. Briefly then take the virtues of them, as followeth :

GOVERNMENT AND VIRTUES. The seeds of these soft rushes, say Dioscorides and Galen, toasted, and drunk in wine and water, stay the lask and the courses, when they come down too abundantly ; but it causeth head-ach. It likewise provoketh sleep, but must be given with caution. Pliny saith, the root, boiled in water to the consumption of one third, helpeth the cough.

R Y E.

GOVERNMENT AND VIRTUES. RYE is more digesting than wheat. The bread and the leaven thereof ripeneth and breaketh imposthumes, biles, and other swellings : the meal of rye, put between a double cloth, moistened with a little vinegar, and heated in a pewter dish, and bound fast to the head while it is hot, doth much ease the continual pains of the head. Mathiolus saith, that the ashes of rye-straw, put into water, and suffered therein a day and a night, will heal the chops of the hands or feet.

R I C E.

DESCRIPTION. THIS grain, or corn, riseth up with a stronger stalk than wheat, about a yard high, with sundry joints, and a large thick leaf at each of them, like the reed ; at the top it beareth a spiked tuft spread into branches, whose blooming is said to be purplish, with the seed standing severally on them inclosed in a hard brown straked husk, and an arm at the head of every one of them ; which, being hulled, is very white, of the bigness almost of wheat-corns blunt at both ends.

NAMES. Rice is called in Latin *oriza*, and the Italians call it *rizo*, the French *ris*.

PLACE AND TIME. This grain originally was brought out of the East Indies, where in many places it yieldeth two crops in a year, being the chiefest corn they live upon, and not with them only, but through all Æthiopia and Africa ; and thence hath been brought into Syria, Egypt, Italy, &c. It delighteth to grow in moist grounds, and is ripe about the middle of autumn.

GOVERNMENT AND VIRTUES. It is a solar grain. The physical use thereof is chiefly to stay the lasks and fluxes of the stomach and belly, especially if it be a little parched before it be used, and steel quenched in the milk wherein it is boiled, being somewhat binding and drying ; it is thought also to increase seed, being boiled in milk, and some sugar and cinnamon put thereto ; the flower of rice is of the same property

property, and is sometimes also put into cataplasms that are applied to repel humours from flowing or falling to the place, and is also conveniently applied to womens breasts, to stay inflammations therein.

SWEET OR AROMATICAL REED.

KINDS AND NAMES. THERE is one sort called *calamus aromaticus Mathioli*, Mathiolus's aromatical reed, a second called *calamus aromaticus Syriacus vel Arabicus suppositivus*, the supposed Syrian or Arabian aromatical reed; and the third, the true *acorus* of Dioscorides, or sweet-smelling reed, called in shops *calamus aromaticus*, and likewise *acorus verus*, *five calamus officinarum*.

DESCRIPTION. 1. Mathiolus's aromatical reed. This groweth with an upright tall stalk, set full of joints of certain spaces up to the top, (not hollow, but stuffed full of a white, spongy, pith, of a gummy taste, somewhat bitter, and of the bigness of a man's finger,) and at every one of them a long narrow leaf, of a dark green colour, smelling very sweet, differing therein from all other kinds of reeds; on the tops whereof groweth a bushy or feather-like panicle, resembling those of the common reed. The root is knobby, with divers heads thereat, whereby it increaseth and shooteth forth new heads of leaves, smelling also very sweet, having a little binding taste, and sharp withal.

2. The supposed Syrian or Arabian aromatical reed, riseth up from a thick root three or four inches long, big at the head and small at the bottom, with one stalk, sometimes more, two cubits high, being straight, round, smooth, and easy to break into splinters; full of joints, and about a finger's thickness, hollow and spongy within, of a whitish yellow colour; the stalk is divided into other branches, and they again into other smaller ones, two usually set together at a joint, with two leaves under them likewise, very like unto the leaves of *lysimachia*, the willow-herb, or loosestrife, but less, being an inch and an half long; compassing the stalk at the bottom, with sundry veins running all the length of them; from the joints rise long stalks, bearing sundry yellow small flowers, made of leaves like also unto *lysimachia*, with a small pointel in the middle, after which follow small, blackish, long heads or seed-vessels, pointed at the end, and having in them small blackish seed: the stalk hath little or no scent, yet not unpleasent, as *Alpinus* saith, being bitter, with a little acrimony therein; but *Bauhinus* saith, it is of an aromatical taste, and very bitter.

3. The sweet-smelling reed, or *calamus officinarum*, or *acorus verus*, hath many flags, long and narrow fresh green leaves, two feet long, or more; yet oftentimes somewhat brownish at the bottom, the one rising or growing out of the side of the other,

in the same manner that other flags or flower-de-luces grow, which are thin on both sides, and ridged or thickest in the middle; the longest, for the most part, standing in the midst, and some of them as it were curled or plaited towards the ends or tops of them; smelling very sweet, as well when they are green and fresh as when they are dried and kept a long time; which do so abide in a garden a long time, as though it never did nor never would bear flower; the leaves every year drying down to the ground, and shooting out fresh every spring; but, after three or four years abiding in a place, it shooteth forth a narrow long leaf by itself, flat like unto the other leaves, especially from the middle upwards; but from the bottom to the middle it is flat, at which place cometh forth one long round head, very seldom two; in form and bigness like unto the catkin or aglet of the hazel-nut tree, growing upright, and of the length and thickness of one's finger, or rather bigger; set with several small lines or divisions, like unto a green pine-apple; of a purplish green colour for the most part; out of which bunches shoot forth small pale whitish flowers, consisting of four small leaves apiece, without so good a scent as the leaves, falling quickly away, and not yielding any seed. The root is thick and long, lying under the surface of the ground, shooting forward, and with small roots or suckers, on all sides like unto the garden valerian, whitish on the outside, or greenish if it lie above the ground, and more pale or whitish on the inside, with many joints thereabouts, and whereat it hath or doth shoot forth long thick fibres underneath, whereby it taketh strong hold in the ground.

PLACE AND TIME. The first is said by Mathioli, and others, to grow in India, Syria, and Judæa; the dry stalks of the second are said to grow at the foot of Mount Libanus, in Syria, not far from Tripoli, in the wet grounds there; the third in sun-dry moist places in Egypt, and by the lake Gennefareth in Judæa, and in divers places of Syria and Arabia.

The other *calamus* of the shops, or true *acorus*, groweth in many places of Turkey, in moist grounds, whence the largest roots, the firmest, whitest, and sweetest, are brought unto us; it groweth also in Russia and thereabouts, in great plenty. It is sometimes found in moist grounds in Yorkshire, and the northern parts of England.

GOVERNMENT AND VIRTUES. These reeds are under the dominion of Venus, of a temperate quality. The *calamus* of Dioscorides, he saith, hath these properties: it provoketh urine, and, boiled with grass-roots and smallage, it helpeth those that have the dropsy; it fortifieth the reins, and is good against the stranguary, and is also profitable for those that have the rupture; the fumes of it, taken through a to-

bacco-

bacco-pipe, either by itself or with some dried turpentine, cure a cough; it is put into baths for women to sit in, also in glisters to ease pains.

It is used in mollifying oils and plaisters, that serve to ripen hard imposthumes, as also for the sweet scent thereof. Galen saith, it being of a temperature moderate, between heat and cold, and somewhat astringent, and having a very little acrimony, it is profitably used among other things that help the liver and stomach, doth provoke urine, is used with other things in fomentations for inflammations, and gently to move the courses. Dioscorides saith, that the sweet flag is good to provoke urine, if the decoction thereof be drunk. It helpeth to ease pains in the sides, liver, and breast, as also to ease the griping pains of the cholic and cramp, and is good against ruptures; it wastes the spleen, helps the stranguary, and bitings of venomous creatures. It is also good in baths for women to sit in, for distempers of the womb. The juice, dropped into the eyes, drieth rheums therein, and cleareth the sight, taking away all films that may hurt them.

The root is of much use in all antidotes against poison or infection; it is a good remedy against a stinking breath, to take the root fasting every morning for some time together. The hot fumes of the decoction made in water, and taken in at the mouth through a funnel, are good to help those that are troubled with a cough. A drachm of the powder of the roots, with as much cinnamon, taken in a draught of wormwood wine, is good to comfort and strengthen a cold weak stomach: the decoction thereof is good against convulsions or cramps, and for falls and inward bruises. An oxymel or syrup made hereof in this manner is effectual for all cold spleens and livers: take of the roots of *acorus*, one pound; wash and pick them clean, then bruise them, and steep them for three days in vinegar, after which time let them be boiled together to the consumption of the one half of the vinegar, which, being strained, set to the fire again, putting thereto as much honey as is sufficient to make it into a syrup; an ounce of this syrup in the morning, in a small draught of the decoction of the same roots, is sufficient for a dose; the whole roots, preserved either in honey or sugar, are effectual for the same purposes; but the green roots, preserved, are better than the dried roots, which are first steeped and then preserved. It likewise mollifieth hard tumours in any part of the body.

S A F F R O N.

THE herb needs no description, it being known generally where it grows.

PLACE. It grows frequently at Walden in Essex, and in Cambridgeshire.

GOVERNMENT AND VIRTUES. It is an herb of the Sun, and under the Lion, and therefore strengthens the heart exceedingly. Let not above ten grains be given at

one time, for, being taken in an immoderate quantity, it may hurt the heart instead of helping it. It quickeneth the brain, for the Sun is exalted in Aries, as well as he hath his house in Leo; it helpeth the consumption of the lungs and difficulty of breathing: it is an excellent thing in epidemical diseases, as pestilence, small-pox, and measles. It is a notable expulsive medicine, and remedy for the yellow jaundice. My own opinion is, that hermodactils are nothing else but the roots of saffron dried; and my reason is, that the roots of all crocus, both white and yellow, purge flegm as hermodactils do; and, if you dry the roots of any crocus, neither your eyes nor your taste shall distinguish them from hermodactils.

S A G E*.

OUR ordinary garden sage is so well known by every inhabitant of this kingdom, that it needeth no description.

TIME. It flowereth in or about June, July, and August.

GOVERNMENT AND VIRTUES. Jupiter claims this, and it is good for the liver, and to breed good blood. A decoction of the leaves and branches of sage, saith Dioscorides, provoketh urine, bringeth down women's courses, helpeth to expel the dead child, and causeth the hair to become black; it stayeth the bleeding of wounds, and cleanseth foul ulcers or sores. Orpheus saith, three spoonfuls of the juice of sage taken fasting, with a little honey, doth presently stay the spitting or casting up of blood. For them that are in a consumption these pills are much commended: take of spikenard and ginger each two drachms; of the seed of sage, toasted at the fire, eight drachms; of long pepper twelve drachms; all these being brought into fine powder, put thereto so much juice of sage as may make them into a mass for pills, taking a drachm of them every morning fasting, and so likewise at night, drinking a little pure water after them. Mathiolus saith, it is very profitable for all manner of pains of the head, coming of cold and rheumatic humours, as also for pains of the joints, whether inward or outward, and therefore helpeth the falling-sickness, the lethargy, such as are dull and heavy of spirit, the palsy, and is of much use in all fluxions of rheum from the head, and for the diseases of the chest or breast. The leaves of sage and nettles, bruised together, and laid upon the imposthume that riseth behind the ears, do assuage it much. The juice of sage, taken in warm water, helpeth a hoarseness and cough. The leaves sodden in wine, and laid upon the place affected with the palsy, helpeth much, if the decoction be drunk also. Sage taken

* The occult virtues of saffron and sage are admirably combined in the SOLAR TINCTURE, with all solar herbs, antiscorbutics, purifiers of the blood, &c. &c. whence it is, in all scrophulous complaints, an absolute specific.

with

with wormwood is good for the bloody flux : Pliny saith, it helpeth the stinging and biting of serpents, killeth worms that breed in the ears and in sores. Sage is of excellent use to help the memory, warming and quickening the senses, and the conserve made of the flowers is used to the same purpose, and also for all the former recited diseases. The juice of sage drunk with vinegar hath been of good use against the plague at all times. Gargles likewise are made with sage, rosemary, honey-suckles, and plantane, boiled in wine or water, with some honey or allum put thereto, to wash sore mouths and throats. With other hot and comfortable herbs, sage is boiled to bathe the body and legs in the summer-time, especially to warm cold joints or sinews troubled with the palsy or cramp, and to comfort or strengthen the parts. It is much commended against the stitch or pains in the side coming of wind, if the place be fomented warm with the decoction thereof in wine, and the herb also, after the boiling, be laid warm thereto.

W O O D - S A G E.

DESCRIPTION. WOOD-SAGE riseth up with square hoary stalks two feet high at the least, with two leaves at every joint, somewhat like other sage leaves, but smaller, softer, whiter, and rounder, and a little dented about the edges, and smelling somewhat stronger ; at the tops of the stalks and branches stand the flowers on a slender long spike, turning themselves all one way when they blow, and are of a pale and whitish colour, smaller than sage, but hooded and gaping like it ; the seed is blackish and round, four usually seen in a husk together ; the root is long and stringy, with divers fibres thereat ; and it abideth many years.

PLACE. It groweth in woods, and by wood-sides, as also in divers fields and by-lanes in Great Britain.

TIME. It flowereth in June, July, and August.

GOVERNMENT AND VIRTUES. The herb is under Venus. The decoction of wood-sage provoketh urine ; it also provoketh sweat, digesteth humours, and dis-cusseth swellings and nodes in the flesh. The decoction of the green herb made with wine is a safe and sure remedy for those who by falls, bruises, or blows, doubt some vein to be inwardly broken, to disperse and void the congealed blood, and to consolidate the vein ; it is also good for such as are inwardly or outwardly bursten, the drink used inwardly, and the herb applied outwardly ; the same, used in the same manner, is found to be a sure remedy for the palsy. The juice of the herb, or the powder thereof dried, is good for moist ulcers and sores in the legs or other parts, to dry them, and causeth them to heal more speedily. It also cureth green wounds.

S O L O M O N ' s S E A L .

DESCRIPTION. THE common Solomon's seal riseth up with a round stalk about half a yard high, bowing or bending down, set with single leaves one above another, somewhat large, and like the leaves of the lilly-convalley, or May-lilly, with an eye of bluish upon the green, with some ribs therein, and more yellowish underneath. At the foot of every leaf, almost from the bottom up to the top of the stalk, come forth small long white and hollow pendulous flowers, somewhat like the flowers of May-lilly, but ending in five long points, for the most part two together at the end of a long footstalk, and sometimes but one, and sometimes also two stalks with flowers at the foot of a leaf, which are without any scent at all, and stand all on one side of the stalk. After they are past, come in their places small round berries, green at first, and blackish green, tending to blueness, when they are ripe, wherein lie small white hard and stoney seed. The root is of the thickness of one's finger or thumb, white and knobbed in some places, with a flat circle representing a seal, whence it took the name, lying along under the surface of the earth, and not running very low, but with many fibres underneath.

PLACE. It is frequent in divers places of Kent, Essex, and other counties.

TIME. It flowereth about May, or the beginning of June; and the root abideth and shooteth anew every year.

GOVERNMENT AND VIRTUES. Saturn owns the plant. The root of Solomon's seal is found by experience to be available in wounds, hurts, and outward sores, to heal and close up the lips of those that are green, and to dry up and restrain the flux of humours to those that are cold: it is good to stay vomitings and bleedings wheresoever, as likewise all fluxes in man or woman; also to knit any joint, which by weakness useth to be often out of place, or will not stay in long when it is set; also to knit and join broken bones in any part of the body, the roots being bruised and applied to the place; it hath been found by late experience, that the decoction of the root in wine, or the bruised root put in wine or other drink, and after a night's infusion strained off, and drunk, hath relieved both man and beast whose bones have been broken by any occasion, which is the most assured refuge of help to people of all countries that they can have: it is no less effectual to help ruptures and burstings, the decoction in wine, or the powder in broth or drink, being inwardly taken and outwardly applied to the place. The same is also available for inward or outward bruises, falls, or blows, both to dispel the congealed blood, and to take away the pains and the black-and-blue marks that abide after the hurt. The same also, or the distilled water of the whole plant, used to the face or other part of the skin,

skin, cleanseth it from morpew, freckles, spots, or marks whatsoever, leaving the place fresh, fair, and lovely, for which purpose it is much used by the Italian ladies, and is the principal ingredient of most of the cosmetics and beauty wash, advertised by perfumers at a high price.

S A M P H I R E.

DESCRIPTION: ROCK SAMPHIRE groweth with a tender green stalk, about half a yard or two feet at the most, branching forth almost from the very bottom, and stored with fundry thick, and almost round, somewhat long, leaves, of a deep green colour, sometimes three together, and sometimes more, on a stalk, and are sappy, and of a pleasant, hot, or spicy, taste. At the tops of the stalk and branches stand umbels of white flowers, and after them come large seed bigger than fennel seed, yet somewhat alike. The root is great, white, and long, continuing many years, and is of an hot spicy taste.

PLACE. It groweth on the rocks that are often moistened by the sea.

TIME. It flowereth and feedeth in the end of July and August.

GOVERNMENT AND VIRTUES. It is an herb of Jupiter, and was in former times wont to be used more than it now is. It is a safe herb, very pleasant both to the taste and stomach, helping digestion, and in some sort opening the obstructions of the liver and spleen, provoking urine, and helping thereby to wash away the gravel and stone.

S A N I C L E.

DESCRIPTION. THE ordinary sanicle sendeth forth many great round leaves, standing upon long brownish stalks, every one cut or divided into five or six parts, and some of those also cut in, somewhat like the leaf of a crow-foot or dove's-foot, finely dented about the edges, smooth, and of a dark green shining colour, and sometimes reddish about the brims, from among which rise up small round green stalks, without any joint or leaf thereon, except at the top, where it branches forth into flowers, having a leaf divided into three or four parts at that joint with the flowers, which are small and white, starting out of small round greenish yellow heads, many standing together in a tuft; in which afterward are the seeds contained, which are small round rough burs, somewhat like the seeds of clover, and stick in the same manner upon any thing that they touch. The root is composed of many black strings of fibres set together at a little long head, which abideth with the green leaves all the winter.

PLACE. It is found in many shadowy woods, and other places, in England.

TIME. It flowereth in June, and the seed is ripe shortly after.

GOVERNMENT AND VIRTUES. This is one of Venus's herbs. It is exceeding good to heal green wounds, or any ulcers, imposthumes, or bleedings, inwardly. It wonderfully helps those that have any tumours in any part of their bodies, for it represseth and dissipateth the humours, if the decoction or juice thereof be taken, or the powder in drink, and the juice used outwardly; for there is not found any herb that can give such present help either to man or beast when the disease falleth upon the lungs or throat, and to heal up all the putrid malignant ulcers in the mouth, throat, and privities, by gargling or washing with the decoction of the leaves and root, made in water, and a little honey put thereto. It helpeth to stay fluxes of blood either by the mouth, urine, or stool, and lasks of the belly, the ulceration of the kidneys also, and the pains in the bowels, and the gonorrhea or running of the reins, being boiled in wine or water, and drunk: the same also is no less powerful to help any ruptures or burstings, used both inwardly and outwardly; and it is effectual in binding, restraining, consolidating, heating, drying, and healing.

SARACENS CONSOUND, OR SARACENS WOUND-WORT*.

DESCRIPTION. THIS groweth very high, sometimes with brownish stalks, and other times with green and hollow, to a man's height, having many long and narrow green leaves snipped about the edges, somewhat like those of the peach-tree, or willow leaves, but not of such a white green colour: the tops of the stalks are furnished with many pale yellow star-like flowers standing in green heads, which, when they are fallen, and the seed ripe, (which is somewhat long, small, and of a yellowish brown colour, wrapped in down,) is therewith carried away by the wind. The root is composed of many strings or fibres, set together at a head, which perish not in winter, though the stalks dry away. The taste of this herb is strong and unpleasant, and so is the smell.

PLACE. It groweth in moist and wet grounds by the side of woods, and sometimes in the moist places of the shady groves, as also by the water side.

TIME. It flowereth generally about the middle of July, and the seed is soon ripe, and carried away by the wind.

GOVERNMENT AND VIRTUES. Saturn owns this herb. Among the Germans, this wound-herb is preferred before all others of the same quality. Being boiled in

* Wonders are related of the virtues of this herb against hurts and bruises; and it is a great ingredient in the Swifs arquebuse-water. It is balsamic and diuretic; and all its occult powers are judiciously combined in the Author's Solar Tincture; which Medicine no Family should ever be without, particularly such as live remote from Medical assistance.

wine, and drunk, it helpeth the indisposition of the liver, and freeth the gall from obstructions, whereby it is good for the yellow jaundice, and for the dropfy in the beginning of it, for all inward ulcers of the reins, or elsewhere, and inward wounds and bruises; and, being steeped in wine and then distilled, the water thereof drunk is of singular service to ease all gnawings in the stomach, or other pains of the body, as also the pains of the mother; and, being boiled in water, it helpeth continual agues; and this said water, or the simple water of the herb distilled, or the juice or decoction, are very effectual to heal any green wound, old sore, or ulcer, cleansing them from corruption, and quickly healing them up. It is no less effectual for the ulcers in the mouth or throat, be they never so foul or stinking, by washing and gargling them therewith. Briefly, whatsoever hath been said of bugle or fanicle may be found herein.

SAUCE-ALONE, OR JACK-BY-THE-HEDGE.

DESCRIPTION. THE lower leaves of this are rounder than those that grow towards the tops of the stalks, and are set singly, one at a joint, being somewhat round and broad, and pointed at the ends, dented also about the edges, somewhat resembling nettle leaves for the form, but of a more fresh green colour, and not rough or pricking: the flowers are very small, and white, growing at the tops of the stalks one above another; which being past, there follow small and long round pods, wherein are contained small round seeds, somewhat blackish. The root is stringy and thready, perishing every year after it hath given seed, and raiseth itself again of its own sowing. The plant, or any part thereof, being bruised, smelleth of garlic, but is much more pleasant, and tasteth somewhat hot, sharp, and biting, almost like rocket.

PLACE. It groweth under walls, and by hedge-sides, and pathways in fields in many places.

TIME. It flowereth in June, July, and August.

GOVERNMENT AND VIRTUES. It is an herb of Mercury. This is eaten by many country people as sauce to their salt fish, and helpeth to digest the crudities and other corrupt humours ingendered thereby; it warmeth the stomach, and causeth digestion. The juice thereof, boiled with honey, is reckoned to be as good as hedge-mustard for the cough, to cut and expectorate the tough phlegm. The seed, bruised and boiled in wine, is a good remedy for the wind cholic, or the stone, being drunk warm. The leaves also or seed boiled are good to be used in clifters to ease the pains of the stone. The green leaves are held to be good to heal ulcers in the legs.

WINTER AND SUMMER SAVORY.

BOTH these are so well known, (being constant inhabitants in our gardens,) that they need no description.

GOVERNMENT AND VIRTUES. Mercury claims the dominion over this herb. It is a remedy against the cholic and iliac passion: the summer kind is the best. They are both of them hot and dry, especially the summer kind, which is both sharp and quick in taste, expelling wind in the stomach and bowels, and is a present help for the rising of the mother procured by wind, provoketh urine, and is much commended for women with child to take inwardly, and to smell often to. It cutteth tough phlegm in the chest and lungs, and helpeth to expectorate it the more easily: quickeneth the dull spirits in the lethargy, the juice thereof being snuffed or cast up into the nostrils. The juice, dropped into the eyes, cleareth a dull sight, if it proceed of thin cold humours distilling from the brain. The juice, heated with a little oil of roses, and dropped into the ears, easeth them of the noise and ringing in them, and of deafness also. Outwardly applied, with flour, in manner of a poultice, it giveth ease to the sciatica, and members having the palsy, heating and warming them; and taketh away their pains. It also taketh away the pains that comes of stinging by bees, wasps, or any venomous reptile.

S A V I N.

TO describe a plant so well known is needless, it being almost in every garden, and remaining green all the winter.

GOVERNMENT AND VIRTUES. It is under the dominion of Mars, being hot and dry in the third degree; and, being of exceeding clean parts, is of a very digesting quality: if you dry the herb into powder, and mix it with honey, it is an excellent remedy to cleanse old filthy ulcers, and fistulas; but it hinders them from healing. The same is good to break carbuncles and plague sores; it also helpeth the king's evil, being applied to the place: being spread upon a piece of leather, and applied to the navel, it kills the worms in the belly; helps scabs and the itch, running sores, cankers, tetters, and ringworms; and, being applied to the place, may happily cure venereal sores. This I thought proper to mention, as it may safely be used outwardly; but inwardly it cannot be taken without manifest danger, particularly to pregnant women, or those who are subject to flooding.

COMMON WHITE SAXIFRAGE.

DESCRIPTION. THIS hath a few small reddish kernels, covered with some skins lying among divers small blackish fibres, which send forth several round, faint,

or yellowish-green, leaves, greyish underneath, lying above the ground unevenly dented about the edges, and somewhat hairy, green, stalks, two or three feet high, with a few such round leaves as grow below, but smaller, and somewhat branched at the top, whereon stand pretty large white flowers of five leaves each, with some yellow threads in the middle, standing in a long-crested brownish-green husk. After the flowers are past, there ariseth sometimes a round hard head, forked at the top, wherein is contained small blackish seed; but usually they fall away without any seed; and it is the kernels or grains of the root which are usually called the white saxifrage seed, and so used.

PLACE. It groweth in many parts of Great Britain; in meadows and grassy sandy places: it used to grow near Lamb's Conduit, on the back-side of Gray's Inn.

TIME. It flowereth in May, and is then gathered, as well for that which is called the seed as to distil; for it quickly periseth down to the ground in hot weather.

GOVERNMENT AND VIRTUES. It is very effectual to cleanse the reins and bladder, and to dissolve the stone ingendered in them, and to expel it and the gravel by urine; to provoke urine also, and to help the stranguary; for which purposes the decoction of the herb or roots in white wine, or the powder of the small kernelly root, which is called the seed, taken in white wine, or in the same decoction made with white wine, is most usual. The distilled water of the whole herb, roots, and flowers, is most commonly taken. It freeth and cleanseth the stomach and lungs from thick and tough phlegm. There are not many better medicines to break the stone than this, or to cleanse the urinary passages, and cure the gravel.

BURNET-SAXIFRAGE.

DESCRIPTION. THE greater sort of our English burnet-saxifrage groweth up with divers long stalks of winged leaves, set directly opposite one to another on both sides, each being somewhat broad, and a little pointed and dented about the edges, of a sad green colour. At the tops of the stalks stand umbels of white flowers, after which comes small and blackish seed: the root is long and whitish, abiding long. Our lesser burnet-saxifrage hath much finer leaves than the former, and very small, and set one against another, deeply jagged about the edges, and of the same colour as the former. The umbels of the flowers are white, and the seed very small; and so is the root, being also somewhat hot to the taste.

PLACE. These grow in most meadows in England, and are to be found concealed in the grass scarcely to be discerned.

TIME. They flower about July, and the seed is ripe in August.

GOVERNMENT.

GOVERNMENT AND VIRTUES. These herbs are both of the Moon. These saxifrages are as hot as pepper, and Tragus saith, by his experience, they are more wholesome. They have the same properties that the parslies have; but, in provoking urine, and easing the wind and cholic, are much more effectual. The roots or seed, being used either in powder, or in decoction, or any other way, help to break and void the stone in the kidneys, to digest cold, viscous, and tough, phlegm in the stomach, and are a most especial remedy against all kind of venom. Castoreum, being boiled in the distilled water hereof, is good to be given to those that are troubled with cramps and convulsions. Some make the seed into comfits, (as they do carraway seed,) which is effectual to all the purposes aforesaid. The juice of the herb, dropped into the most grievous wounds of the head, drieth up their moisture and healeth them quickly. Some women use the distilled water, to take away spots or freckles in the face or any parts of the body: and to drink the same, sweetened with sugar, for all the purposes aforesaid.

SCABIOUS.

DESCRIPTION. THE common field scabious groweth up with many hairy, soft, whitish-green, leaves, some whereof are but very little if at all jagged on the edges, others very much rent and torn on the sides, and have threads in them, which, upon the breaking, may be plainly seen; from among which rise up divers hairy green stalks, three or four feet high, with such like hairy green leaves on them, but more deeply and finely divided, branched forth a little. At the tops, which are naked and bare of leaves for a good space, stand round heads of flowers, of a pale bluish colour, set together in a head, the outermost whereof are larger than the inward, with many threads also in the middle, somewhat flat at the top, as the head with seed is likewise. The root is great, white, and thick, growing down deep in the ground, and abideth many years.

There is another sort of field scabious, different in nothing from the former, but only that it is smaller.

The corn scabious differeth little from the first, but that it is greater, and the flowers more declining to purple; and the root creepeth under the surface of the earth, and runneth not deep in the ground as the first doth.

PLACE. The first groweth most usually in meadows, especially about London every where. The second in some of the dry fields near London, but not so plentiful as the former. The third in the standing corn, or fallow fields, and the borders of such-like fields.

TIME. They flower in June and July, and some abide flowering until it be late in August, and the seed is ripe in the mean time.

There

There are many other sorts of scabious, but those here described are most familiar with us; the virtues both of these and the red being much alike, you will take them as followeth.

GOVERNMENT AND VIRTUES. Mercury owns the plant. Scabious is very effectual for all sorts of coughs, shortness, of breath, and all other diseases of the breast and lungs, ripening and digesting cold phlegm and other tough humours, voiding them by coughing and spitting. It ripeneth also all sorts of inward ulcers and imposthumes, the pleurisy also, if the decoction of the herb, dry or green, be made in wine, and drunk for some time together. Four ounces of the clarified juice of scabious, taken in the morning fasting, with a drachm of Mithridate or Venice treacle, freeth the heart from any infection of pestilence, if after the taking of it the party perspire two hours in bed. The green herb, bruised, and applied to any carbuncle or sore, is found, by certain experience, to dissolve or break it in three hours space. The same decoction also, drunk, helpeth pains and stitches in the sides. The decoction of the roots, taken for forty days together, or a drachm of the powder of them taken at a time in whey, doth (as Mathiolus saith) wonderfully help those that are troubled with running or spreading scabs, tetters, or ringworms, even though they proceed of the venereal disease. The juice, or decoction, drunk, helpeth also scabs and breakings out of itch and the like. The juice, made up into an ointment, is effectual for the same purpose. The same also helpeth all inward wounds, by the drying, cleansing, and healing, quality therein. A syrup made of the juice and sugar is very effectual to all the purposes aforesaid, and so is the distilled water of the herb and flowers made in due season; especially to be used when the green herb is not in force to be taken. The decoction of the herb and roots, outwardly applied, doth wonderfully help all sorts of hard or cold swellings in any part of the body, and is as effectual for any shrunk sinew or vein. The juice of scabious made up with the powder of borax and camphire, cleanseth the skin of the face or other parts of the body, not only from freckles and pimples, but also from morpew and leprosy. The head being washed with the same decoction, it cleanseth it from dandriff, scurf, sores, itches, and the like, being used warm. Tents, dipped in the juice or water thereof, not only heal green wounds, but old sores and ulcers also. The herb bruised, and applied, doth in short time loosen and draw forth any splinter, broken bone, arrow-head, or other thing, lying in the flesh.

S C U R V Y - G R A S S.

DESCRIPTION. OUR ordinary English scurvy-grass hath many thick leaves more long than broad, and sometimes longer and narrower; sometimes smooth on

the edges, and sometimes a little waved; sometimes plain, smooth, and pointed, sometimes a little hollow in the middle, and round pointed, of a sad green, and sometimes a bluish colour, every one standing by itself upon a long foot-stalk, which is brownish or greenish also, from among which rise small slender stalks, bearing a few leaves thereon like the other, but longer and less for the most part; at the tops whereof grow many whitish flowers with yellow threads in the middle, standing about a green head which becometh the seed-vessel. The seed is reddish, tasting somewhat hot: the root is composed of many white strings, which stick deeply in the mud, wherein it chiefly delighteth; yet it will grow in upland and dry grounds; and tasteth a little brackish, or salt, even there, but not so much as where it hath salt water to feed upon.

PLACE. It groweth all along the Thames side, on the Essex and Kentish shores, from Woolwich round about the sea coasts to Dover, Portsmouth, and even to Bristol, where it is in plenty; the other, with round leaves, groweth in the marshes in Holland in Lincolnshire, and other places of Lincolnshire by the sea-side.

2. Dutch scurvy-grass is most known and frequent in gardens, and hath divers fresh, green, and almost round, leaves, rising from the root, not so thick as the former, yet in some rich ground very large, not dented about the edges, nor hollow in the middle, every one standing on a long foot-stalk; from among these rise up divers long slender weak stalks, higher than the former, and with more white flowers, which turn into smaller pods, and smaller brownish seed, than the former: the root is white, small, and thready: the taste of this is not salt at all, but hot, aromatical, and spicy.

TIME. It flowereth in April or May, and the seed is ripe soon after.

GOVERNMENT AND VIRTUES. It is an herb of Jupiter. The English scurvy-grass is more used for its salt taste, which doth somewhat open and cleanse; but the Dutch scurvy-grass is of better effect, and chiefly used by those that have the scurvy, especially to purge and cleanse the blood, the liver, and the spleen, for all which diseases it is of singular good effect, by taking the juice in the spring every morning fasting in a cup of drink. The decoction is good for the same purpose, and the herb, tunned up in new drink, either by itself, or with other things, openeth obstructions, evacuateth cold clammy and phlegmatic humours both from the liver and the spleen, wasting and consuming both the swelling and hardness thereof, and thereby bringing to the body a more lively colour. The juice also helpeth all foul ulcers and sores in the mouth, if it be often gargled therewith; and, used outwardly, it cleanseth the skin from spots, marks, or scars.

S E L F - H E A L.

NAMES. IT is called prunel, carpenters herb, hook-heal, and sickle-wort.

DESCRIPTION. The common self-heal is a small, low, creeping, herb, having many small roundish pointed leaves, somewhat like the leaves of wild mints, of a dark green colour, without any dents on the edges, from among which rise divers small leaves up to the tops, were stand brownish spiked heads, of many small brownish leaves like scales and flowers set together, almost like the head of cassidony, which flowers are gaping, and of a bluish purple, or more pale below, in some places sweet, but not so in others. The root consists of many strings or fibres downward, and spreadeth strings also, whereby it increaseth. The small stalks, with the leaves, creeping upon the ground, shoot forth fibres taking hold of the ground, whereby it is made a great tuft in a short time.

PLACE. It is found in woods and fields every where in this kingdom.

TIME: It flowereth in May, and sometimes in April.

GOVERNMENT AND VIRTUES. This is an herb of Venus. It is a special herb for inward and outward wounds: take it inwardly in syrups for inward wounds; outwardly, in unguents and plaisters, for outward. As self-heal is like bugle in form, so also in the qualities and virtues, serving for all the purposes whereto bugle is applied, with good success, either inwardly or outwardly. If it be accompanied with bugle, fanicle, and other the like wound-herbs, it will be the more effectual; and to wash or inject into ulcers, in the parts outwardly, where there is cause to repress the heat and sharpness of humours flowing to any fore ulcer, inflammation, swelling, or the like; or to stay the flux of blood in any wound or part; this is used with good success; as also to cleanse the foulness of sores, and cause them more speedily to be healed. It is a good remedy for green wounds, to close the lips of them, and to keep the place from any further inconvenience. The juice thereof, used with oil of roses, to anoint the temples and forehead, is very effectual to remove the head-ach; and the same, mixed with honey of roses, cleanseth and healeth all ulcers in the mouth and throat, from what cause soever.

S E R V I C E - T R E E.

IT is so well known in the places where it grows, that it needeth no description.

TIME. It flowereth before the end of May, and the fruit is ripe in October.

GOVERNMENT AND VIRTUES. Services, when they are mellow, are fit to be taken to stay the fluxes, scowering, and castings, yet less than medlars; if they be dried.

dried before they be mellow, and kept all the year, they may be used in decoction for the said purpose, either to drink, or to bathe the parts requiring it; and are profitably used in that manner to stay the bleeding of wounds. The service-tree is under the dominion of Saturn, and of a cold nature.

S H E P H E R D S P U R S E.

NAMES. IT is also called shepherds scrip, shepherds pouch, toy-wort, pick-purse, and case-weed.

DESCRIPTION. The root is small, white, and perisheth every year. The leaves are small and long, of a pale green colour, and deeply cut on both sides: amongst which springeth up a stalk, which is small and round, containing small leaves upon it even to the top. The flowers are white, and very small; after which come the little cases which hold the seed, which are flat, almost in the form of a heart.

PLACE. They are frequent in Great Britain, commonly by the paths side.

TIME. They flower all the summer long; nay, some of them are so fruitful, that they flower twice a year.

GOVERNMENT AND VIRTUES. It is under the dominion of Saturn, and of a cold, dry, and binding, nature. It stops all fluxes of blood, either caused by inward or outward wounds; as also flux of the belly, bloody flux, and spitting of blood; being bound to the wrists and the soles of the feet, it helps the yellow jaundice. The herb, being made into a poultice, helps inflammations and St. Anthony's fire; the juice, being dropped into the ears, helps pains and noises therein. A good ointment may be made of it for all wounds, especially wounds in the head.

S M A L L A G E.

THIS also is very well known, and therefore I shall not trouble the reader with any description thereof.

PLACE. It groweth naturally in wet and marshy grounds; but, if it be sown in gardens, it there prospereth very well.

TIME. It abideth green all the winter, and seedeth in August.

GOVERNMENT AND VIRTUES. It is an herb of Mercury. Smallage is hotter, drier, and much more medicinable, than parsley, for it much more openeth obstructions of the liver and spleen, rarefieth thick phlegm, and cleanseth it and the blood withal. It provoketh urine, and is good against the yellow jaundice. It is effectual against tertian and quartan agues, if the juice thereof be taken; but especially made into a syrup. The juice also, put to honey of roses, and barley water, is very good

to gargle the mouth and throat of those that have sores and ulcers in them, and will quickly heal them: the same lotion also cleanseth and healeth all other foul ulcers and cancers elsewhere. The seed is especially used to break and expel wind, to kill worms, and to help a stinking breath. The root is effectual to all the purposes aforesaid, and is held to be stronger in operation than the herb, but especially to open obstructions, and to rid away any ague, if the juice thereof or the decoction be taken in wine. All the purposes of this herb are likewise answered by the Solar Tincture, which imbibes its occult property.

SOPE-WORT, OR BRUISE-WORT.

DESCRIPTION. THE root creepeth under ground far and near, with many joints therein, of a brown colour on the outside, and yellowish within, shooting forth in divers places many weak round stalks, full of joints, set with two leaves a-piece at every one of them on the contrary side, which are ribbed somewhat like that of plantane, and fashioned like the common field white campion leaves, seldom having any branches from the sides of the stalks, but set with divers flowers at the top standing in long husks like the wild campions, made of five leaves each, round at the ends, and a little dented in the middle, of a pale rose colour, almost white, sometimes deeper, and sometimes paler, of a reasonable good scent.

PLACE. It groweth wild in low and wet grounds in many parts of England, by the brooks and sides of running waters.

TIME. It flowereth usually in July, and so continueth all August and part of September.

GOVERNMENT AND VIRTUES. Venus owns it. The country people in many places do use to bruise the leaves of sope-wort, and lay it to their fingers, hands, or legs, when they are cut, to heal them. Some say it is diuretic, and expels gravel and stone in the kidneys, and is also good to void hydropical waters, thereby to cure the dropfy, tympany, or an impoverished state of the blood.

S O R R E L:

OUR ordinary sorrel, which groweth in gardens, and also wild in the fields, is so well known, that it needeth no description.

GOVERNMENT AND VIRTUES. It is under the dominion of Venus. Sorrel is prevalent in all hot diseases, to cool any inflammation and heat of blood in agues pestilential or choleric, or other sickness and fainting, arising from heat, and to refresh the overspent spirits with the violence of furious or fiery fits of agues, to quench thirst,

and procure an appetite in fainting or decayed stomachs; for it resisteth the putrefaction of the blood, killeth worms, and is a cordial to the heart, for which the seed is more effectual, being more drying and binding, and thereby stayeth the hot humours in the bloody flux, or flux of the stomach. The roots also, in a decoction, or in powder, are effectual for all the said purposes. Both roots and seed, as well as the herb, are held powerful to resist the poison of the scorpion. The decoction of the roots is taken to help the jaundice, and to expel the gravel and stone. The decoction of the flowers made with wine, and drunk, helpeth the black jaundice, as also the inward ulcers of the body or bowels. A syrup made with the juice of sorrel and fumitory is a sovereign help to kill those sharp humours that cause the itch. The juice thereof with a little vinegar may be used outwardly for the same cause, and is also profitable for tetters, ringworms, &c. It helpeth also to disperse the kernels in the throat; and the juice, gargled in the mouth, helpeth the sores therein. The leaves wrapped up in a colewort leaf, and roasted under the embers, and applied to a hard imposthume, borch, bile, or plague-sore, both ripen and break it. The distilled water of the herb is of much good use for all the purposes aforesaid; and the leaves eaten in a salad are excellent for the blood.

WOOD-SORREL.

DESCRIPTION. THIS groweth low upon the ground, having a number of leaves coming from the root, made of three leaves like trefoil, but broad at the ends, and cut in the middle, of a faint yellowish green colour, every one standing on a long footstalk, which at their first coming up are close folded together to the stalk; but, opening afterwards, are of a fine sour relish, and yield a juice which will turn red when it is clarified, and maketh a most dainty clear syrup. Among these leaves riseth up divers slender weak footstalks, with every one of them a flower at the top, consisting of five small pointed leaves, star-fashion, of a white colour in most places, and in some dashed over with a small shew of a bluish on the back side only. After the flowers are past, follow small round heads, with small yellowish seed in them. The roots are nothing but small strings fastened to the end of a small long piece, all of them being of a yellowish colour.

PLACE. It groweth in many places of England, in woods and other places not too much open to the sun.

TIME. It flowereth in April and May.

GOVERNMENT AND VIRTUES. Venus owns it. Wood-sorrel serveth to all the purposes that the other sorrels do, and is more effectual in hindering the putrefaction of blood, and ulcers in the mouth and body, and in cooling and tempering heats and

and inflammations, to quench thirst, to strengthen a weak stomach, to procure an appetite, to stay vomiting, and is very excellent in any contagious sickness, or pestilential fever. The syrup made of the juice is effectual in all the cases aforesaid, and so is the distilled water of the herb. Spunges or linen cloths wet in the juice, and applied outwardly to any hot swellings or inflammations, do much cool and help them. The same juice taken, and gargled in the mouth, for some time, and frequently repeated, doth wonderfully help a stinking canker or ulcers therein. It is of singular service for wounds in any part of the body, to stay the bleeding, and to cleanse and heal the wounds; and helpeth to stay any hot defluxions into the throat or lungs, and cleanseth the viscera.

S O W - T H I S T L E S.

SOW-THISTLES grow in every part of this kingdom, and are so well known, that they need no description.

PLACE. They grow in our gardens and manured grounds, and sometimes by old walls, the path-sides of fields and highways.

GOVERNMENT AND VIRTUES. This and the former are under the influence of Venus. Sow-thistles are cooling, and somewhat binding, and are very fit to cool an hot stomach, and to ease the gnawing pains thereof. The herb, boiled in wine, is very helpful to stay the dissolution of the stomach; and the milk that is taken from the stalks when they are broken, given in drink, is beneficial to those that are short winded. Pliny saith, that it hath caused the gravel and stone to be voided by urine, and that the eating thereof helpeth a stinking breath. The said juice, taken in warm drink, helpeth the stranguary. The decoction of the leaves and stalks causeth abundance of milk in nurses, and their children to be well coloured, and is good for those whose milk doth curdle in their breasts. The juice boiled or thoroughly heated with a little oil of bitter almonds in the peel of a pomegranate, and dropped into the ears, is a sure remedy for deafness, singings, and all other diseases, in them. The herb bruised, or the juice, is profitably applied to all hot inflammations in the eyes, or wheresoever else, and for wheals, blisters, or other the like eruptions, or heat, in the skin; also for the heat and itching of the hemorrhoids, and the heat and sharpness of humours in the secret parts of man or woman. The distilled water of the herb is not only effectual for all the diseases aforesaid, to be taken inwardly with a little sugar, (which medicine the daintiest stomach will not refuse,) but outwardly, by applying cloths or spunges wetted therein. It is good for women to wash their faces therewith, to clear the skin, and to give a lustre thereto. The virtue of this
plant

plant lies in its milky juice, which is of great value in difficulty of hearing. This often arises from obstructing wax, often from inflammation, and sometimes from both these causes conjoined.

S O U T H E R N W O O D .

SOUTHERNWOOD is so well known to be an ordinary inhabitant in almost all gardens, that it needeth no description.

TIME. It flowereth for the most part in July and August.

GOVERNMENT AND VIRTUES. It is a Mercurial plant, worthy of more esteem than it hath. Dioscorides saith, that the seed bruised, heated in warm water and drunk, helpeth those that are troubled with the cramps, or convulsions of the sinews, the sciatica, or difficulty in making water. The same taken in wine is an antidote, or counter-poison, and driveth away serpents and other venomous creatures; as also the smell of the herb, being burnt, doth the same. The oil thereof, anointed on the back-bone before the fits of agues come, preventeth them; it taketh away inflammations in the eyes, if it be put with some part of a roasted quince, and boiled with a few crumbs of bread and applied. Boiled with barley-meal, it taketh away pimples, pushes, or wheals, that rise in the face or other part of the body. The seed as well as the dried herb is often given to kill worms in children. The herb bruised helpeth to draw forth splinters and thorns out of the flesh. The ashes thereof dry up and heal old ulcers that are without inflammation, although by the sharpness thereof it makes them smart. The ashes, mingled with old sallad oil, help those that have their hair fallen, and are bald, causing the hair to grow again either on the head or beard. Durantes saith, that the oil made of southernwood, and put among the ointments that are used against the French disease, is very effectual, and likewise killeth lice in the head. The distilled water of the herb is said to help them much that are troubled with the stone, as also for the diseases of the spleen and mother. The Germans commend it for a singular wound-herb, and therefore call it stab-wort. It is held by all writers, ancient and modern, to be more offensive to the stomach than wormwood, which has thrown it into disrepute.

S P I G N E L :

DESCRIPTION. THE roots of common spignel do spread much and deep in the ground, many strings or branches growing from one head, which is hairy at the top, of a blackish brown colour on the outside, and white within, of a pleasant smell and aromatic taste, whence rise sundry long stalks of fine cut leaves like hairs, smaller

than dill, set thick on both sides of the stalks, and of a good scent. Among these leaves rise up round stiff stalks, with a few joints and leaves, and at the tops an umbel of fine pure white flowers, at the edges whereof sometimes will be seen a shew of reddish bluish colour, especially before they be full blown, and are succeeded by small somewhat-round seed, bigger than the ordinary fennel, and of a browner colour, divided into two parts, and crested on the back, as most of the umbelliferous seeds are.

PLACE. It groweth wild in Lancashire, Yorkshire, and other Northern counties; and is also planted in gardens.

GOVERNMENT AND VIRTUES. It is an herb of Venus. Galen, saith, the roots of spignel are available to provoke urine; but, if too much thereof be taken, it causeth headach. The roots boiled in wine or water, and drunk, help the stranguary and stoppings of the urine, the wind, swellings and pains in the stomach, and all joint-achs. If the powder of the roots be mixed with honey, and the same taken as a licking medicine, it breaketh tough phlegm, and drieth up the rheum that falleth on the lungs. The roots are accounted very effectual against the stinging or biting of any venomous creature, and is one of the ingredients in mithridate and other antidotes for the same.

SPLEENWORT, OR CETRACH.

DESCRIPTION. THE smooth spleenwort, from a black, thready, and bushy, root, sendeth forth many long single leaves, cut in on both sides into round dents, almost to the middle, which is not so hard as that of pollipody, each division being not always set opposite unto the other, but between each, smooth, and of a light green on the upper side, and a dark yellowish roughness on the back, folding or rolling itself inward at the first springing up.

PLACE. It groweth as well upon stone-walls as moist and shadowy places about Bristol and other the West parts plentifully; as also on Framingham castle, on Beckonsfield church in Berkshire, at Strowd in Kent, and elsewhere, and abideth green all the winter.

GOVERNMENT AND VIRTUES. Saturn owns it. It is generally used against infirmities of the spleen; it helpeth the stranguary, and wasteth the stone in the bladder, and is good against the yellow jaundice and the hiccough; but the use of it in women hindereth conception. Mathiolus saith, that, if a drachm of the dust, that is on the back side of the leaves, be mixed with half a drachm of amber in powder, and taken with the juice of purslane or plantane, it will help the run-

ning of the reins ; and that the herb or root, being boiled and taken, helpeth all melancholic diseases and those especially that arise from the French disease. Camerarius saith, that the distilled water thereof, being drunk, is very effectual against the stone ; and that the lye, made of the ashes thereof, being drunk for some time together, helpeth splenetic persons ; it is used in outward remedies for the same purpose.

STAR-THISTLE.

DESCRIPTION. A COMMON star-thistle hath divers long and narrow leaves lying next the ground, cut or torn on the edges, somewhat deeply, into many almost even parts, soft or a little woolly all over the green, among which rise up divers weak stalks parted into many branches, all lying or leaning down to the ground, that it seemeth a pretty bush, set with many divided leaves up to the tops, where severally stand long and small whitish green heads, set with sharp and long white pricks, (no part of the plant being else prickly,) which are somewhat yellowish : out of the middle whereof riseth the flower composed of many small reddish purple threads ; and in the heads, after the flowers are past, come small whitish round seed, lying in down as the others do. The root is small, long, and woody, perishing every year, and rising again of its own sowing.

PLACE. It groweth wild in the fields about London in many places.

TIME. It flowereth early, and seedeth in July, and sometimes in August.

GOVERNMENT AND VIRTUES. This, like almost all thistles, is under Mars. The seed of this star-thistle made into powder, and drunk in wine, provoketh urine, and helpeth to break the stone, and expel it. The root in powder, given in wine, is good against the plague, or pestilence, and, drunk in the morning fasting for some time together, is very profitable for a fistula in any part of the body. Baptista Sardus doth much commend the distilled water, to help the French disease, to open obstructions of the liver, and cleanse the blood from corrupted humours, and it is profitably given against quotidian or tertian agues.

STRAWBERRIES.

THESE are so well known through this land, that they need no description.

TIME. The flower in May ordinarily, and the fruit is ripe shortly after.

GOVERNMENT AND VIRTUES. Venus owns the herb. Strawberries, when they are green, are cold and dry, but, when they are ripe, they are cold and moist. The berries are excellent good to cool the liver, the blood, and the spleen, or a
hot

hot choleric stomach; to refresh and comfort the fainting spirits, and to quench thirst. They are good also for other inflammations, yet it is not amiss to refrain from them in a fever, lest by their putrifying in the stomach they increase the fits. The leaves and roots boiled in wine or water, and drunk, do likewise cool the liver and blood, and assuage all inflammations in the reins and bladder, provoke urine, and allay the heat and sharpness thereof: the same also, being drunk, stay the bloody flux, and help the swellings of the spleen. The water of the berries, carefully distilled, is a sovereign remedy and cordial in the pacification of the heart; and is good for the yellow jaundice. The juice, dropped into foul ulcers, or the decoction of the herb and root, doth wonderfully cleanse and help to cure them. Lotions and gargles for sore mouths, or ulcers therein, or elsewhere, are made with the leaves and roots, which are also good to fasten loose teeth, and to heal spongy foul gums. It helpeth also to stay catarrhs or defluxions of rheum into the mouth, throat, teeth, or eyes. The juice, or water, is good for hot and red inflamed eyes; it is also of excellent property for all pushes, wheals, and other breakings forth of hot and sharp humours, in the face and hands, or other parts of the body, to bathe them therewith; and to take away any redness in the face, or spots or other deformities in the skin, and to make it clear and smooth. Some use this medicine: take so many strawberries as you shall think fitting, and put them into a distillatory, or body of glass, fit for them; which being well closed, set it in a bed of horse-dung for twelve or fourteen days, and afterwards distil it carefully, and keep it for your use. It is an excellent water for hot inflamed eyes, and to take away any film or skin that beginneth to grow over them, and for such other defects in them as may be helped by any outward medicine.

S U C C O R Y.

DESCRIPTION. THE garden succory hath longer and narrower leaves than endive, and more cut in and torn at the edges, and the root abideth many years; it beareth also many blue flowers like endive, and the seed is hardly distinguishable from the seed of the smooth or ordinary endive.

GOVERNMENT AND VIRTUES. It is an herb of Jupiter. Garden succory, as it is more dry and less cold than endive, so it openeth more. A handful of the leaves or roots boiled in wine or water, and a draught thereof drunk fasting, driveth forth choleric and phlegmatic humours; openeth obstructions of the liver, gall, and spleen; helpeth the yellow jaundice, the heat of the reins, and of the urine; the dropsy also, and those that have an evil disposition in their bodies by reason of long sickness,
evil

evil diet, &c. which the Greeks call *καχεξία cachexia*. A decoction thereof made with wine, and drunk, is very effectual against long lingering agues, and a drachm of the seed in powder drunk in wine before the fit of an ague, helpeth to drive it away. The distilled water of the herb and flowers (if you can take them in time) is good for hot stomachs, and in agues, either pestilential or of long continuance, for swoonings, and the passions of the heart, for the heat and head-ach in children, and for the disorders of the blood and liver. The said water, or the juice, or the bruised leaves, applied outwardly, allayeth swellings, inflammations, St. Anthony's fire, pusses, wheals, and pimples, especially used with a little vinegar, as also to wash pestiferous sores. The said water is very effectual for sore eyes that are inflamed with redness, and for nurses breasts that are pained by abundance of milk.

STONE-CROP, OR SMALL HOUSE-LEEK.

DESCRIPTION. IT groweth with divers trailing branches upon the ground, set with many thick, fat, roundish, whitish, leaves, pointed at the ends; the flowers stand many of them together, somewhat loosely; the roots are small, and run creeping under the ground.

PLACE. It groweth upon the stone walls, and mud walls; upon the tiles of houses and penthouses, and amongst rubbish, and in other gravelly places.

TIME. It flowereth in June and July, and the leaves are green all the winter.

GOVERNMENT AND VIRTUES. It is under the dominion of the Moon, cold in quality, and something binding, and therefore very good to stay defluxions, especially such as fall upon the eyes; it stops bleeding both inward and outward, helps cankers and all fretting sores and ulcers; it abates the heat of choler, thereby preventing diseases thence arising from cholerick humours. It expels poison, resisteth pestilential fevers, and is exceeding good also for tertian agues. It is so harmless an herb, you can scarce use it amiss. Being bruised and applied to the place, it helps the king's evil, and any other knots, or kernels, in the flesh; as also the piles.

SARSAPARILLA.

THIS is reckoned amongst the sorts of prickly bindweeds, of which there are two sorts, and this sarsaparilla brought from the West Indies makes the third kind. Their names with their descriptions severally follow.

DESCRIPTION: 1. Prickly bindweed with red berries, called in Latin *smilax aspera fructu rubro*. This groweth up with many branches, wherewith it windeth about trees, and other things, set with many crooked pricks or thorns like a bramble, all

the whole length binding this way and that in a seemly proportion, at every joint it boweth or bendeth itself, having a somewhat broad and long leaf thereat, standing upon a long foot-stalk, and is broad at the bottom, with two forked round ends, and then groweth narrower unto the point; the middle rib on the backside of most of them having many small thorns or pricks, and also about the edges; the lowest being the largest, and growing smaller up to the top, smooth and of a fair green colour, and sometimes spotted with white spots. At the joints with the leaves also come forth tendrils, like a vine, whereby it winds itself; the flowers stand at the tops of the branches at three or four joints, many breaking forth into a cluster, which are white, composed of six leaves each, star-fashion, and sweet in scent, after which come the fruit, which are red berries when they are ripe, of the bigness of asparagus-berries or small grapes; and in some less, wherein are contained sometimes two or three hard black stones, like those of asparagus. The root is slender, white, and long, in hard dry grounds not spreading far, but in the looser and moister places running down into the ground a pretty way, with divers knots and joints.

2. Prickly bindweed with black-berries, *Smilax aspera fructu nigro*. This other prickly bindweed groweth like the former, the branches being jointed in like manner with thorns on them, but not climbing like the former; the leaves are somewhat like it, not having those forked ends at the bottom of every leaf, but almost wholly round, and broad at the bottom, of a darker green colour also, seldom having any thorns or pricks, either on the back or edges of the leaves, with tendrils like a vine also: the flowers come forth in the same manner, and are star-fashion, consisting of six leaves like the other, of an incarnate or bluish colour, with a round red umbone in the middle of every one, which is the beginning of the berry, which when it is ripe will be black, being more sappy or fleshy than the other, with stones or kernels within them like unto it: the roots hereof are bigger and fuller than the former for the most part, and spread further under the ground.

3. Sarsaparilla of America, *Smilax aspera Peruviana*. The sarsaparilla that cometh from America into Spain hath been seen fresh, even the whole plant, and hath been verified in all things to resemble the prickly bindweed, and in nothing different from it. But certainly the plant of sarsaparilla that groweth in Peru and the West Indies is a peculiar kind of itself, differing from the *Smilax aspera* as mechoacan doth from our briony: this doth wind itself about poles or any thing else it can lay hold on to climb on; the branches have crooked prickles growing on them as the *Smilax aspera* hath, but fewer and not so sharp; it hath very green leaves like those of bindweed, but longer, and cornered like ivy-leaves, ending in a long point: the flowers are said to be very great and white, every one as big as a middle-sized dish, which,

opening in the morning, fadeth at night; which occasioned the Spaniards to call the whole plant *buenas noches*, that is, good night. Gerrard describes the *sarsaparilla* to be the roots of a shrub, having leaves like ivy; but saith nothing of the flowers or fruit, which it may be believed were not then discovered.

PLACE AND TIME. The two first grow in Italy, Spain, and other warm countries, whether continent or isles, throughout Europe and Asia. The third is found only in the West Indies; the best is said to come from the Honduras, others not so good from other places, as the fertility or barrenness of the ground, and the temperature of the climate, afford it; and it hath ripe berries early in hot countries.

GOVERNMENT AND VIRTUES. These are all plants of Mars, of an healing quality, howsoever used; Dioscorides saith, that both leaves and berries, being drunk before or after any deadly poison is taken, are a remedy there-against, serving to expel it. It is said also, that, if to a new-born child some of the juice of the berries hereof be given, it shall not be hurt by poison ever after; it is given as an antidote against all sorts of poison and venomous things: if twelve or sixteen of the berries, being beaten to powder, be given in wine, it procureth urine, when it is stopped; the distilled water of the flowers, being drunk, worketh the same effect, and cleanseth the reins, and assuageth inward inflammations. If the eyes be washed therewith, it taketh away all heat and redness in them; and, if the sores of the legs be washed therewith, it healeth them thoroughly. The true *sarsaparilla* is held generally not to heat, but rather to dry, the humours; yet it is easily perceived, that it doth not only dry the humours, but wasteth them away, by a secret and hidden property therein; much whereof is performed by sweating, which it promoteth very effectually. It is much used in many kinds of diseases; as, in all cold fluxes from the head and brain, rheums, and catarrhs, as also in all cold griefs of the stomach, and expelleth wind very powerfully. It helpeth not only the French disease, but all manner of aches in the sinews or joints; all running sores in the legs, all phlegmatic swellings, tetters, or ringworms, and all manner of spots, and foulness of the skin: it is not proper to be given to those whose livers are over hot, or to such as have agues. In former times, it was used beaten to powder, and so drunk; others used to boil it until it became tender, which, being beaten or broken, was afterwards strained into the decoction, making a kind of thick drink like cream. Some others, and that most usually, boiled it in water, to the half, or the consumption of the third part, as they would have it stronger or weaker, and that either by itself or with other things proper for the disease it was intended for; and others also put it amongst other things for drink.

An excellent diet-drink may be made as follows: take *lignum vitæ*, which is *guaiacum*, nine ounces; bark of the same, two ounces; *sassafras* one ounce, *sarsaparilla*

rilla four ounces, juniper-berries one ounce; boil them in two ounces of fountain-water to the consumption of half, add to the strained liquor coriander-seeds four drachms, cinnamon, liquorice, each two drachms. This may be taken as an ordinary drink for all the diseases before-mentioned.

S A U N D E R S.

KINDS AND DESCRIPTION. IN our shops, for physical use, we have three sorts of saunders, whereof the white and yellow are sweet woods, but the yellow is the sweetest; the red hath no scent. The saunders-tree groweth to be as big as a walnut-tree, having fresh green leaves like the mastic-tree, and darkish blue flowers, the fruit being like cherries for the size, but without any taste; black when they are ripe, and quickly falling away. The wood itself is without scent, as it is said, while it is living and fresh, and smelleth sweet only when it is dry. The white and the yellow woods are so hard to be distinguished before that time, that none but those Indians that usually fell those trees do know their difference before-hand; and can tell which will prove better than others: the chiefest part, and smelling sweetest, is the heart of the wood. They are distinguished by these names, *santalum album citrinum, et rubrum*.

GOVERNMENT AND VIRTUES. All the saunders are under the solar regimen, they are cooling and cordial, and used together in sundry cordial medicines; but the white and the yellow are the more cordial and comfortable, by reason of their sweetness; and the red more cooling and binding; which quality neither of the other are without, though in a less proportion. The red is often used to stay thin rheum falling from the head, and to cool hot inflammations, hot gouts, and in hot agues to cool and temper the heat; but the white and yellow are both cordial and cephalic, applied with rose-water to the temples, procuring ease in the head-ach, and are singular good for weak and fainting stomachs through heat, and in the hot fits of agues. They are very profitably applied in fomentations for the stomach, spirits, and palpitations of the heart, which also do comfort and strengthen them, and temperate the melancholy humour, and procure alacrity and mirth, which quality is attributed to the yellow more than the white.

S C A M M O N Y.

DESCRIPTION. THE true scammony hath a long root of a dark ash-colour on the outside, and white within, and of the bigness of an arm, with a pith in the middle

dle thereof and many fibres thereat, from whence arise many long, round, green, branches, winding themselves like a bindweed about stakes and trees, or any other thing that stands next it, unto a good height, without any clasping tendrils, like the true or wild vine: from the joints of the branches come forth the leaves, every one by itself upon short footstalks, somewhat broad at the bottom, with two corners next thereto, and some also round; and then growing long and narrow to the end, being of a fair green colour, and smooth, somewhat shining. Towards the tops of the branches, at the joints with the leaves, come forth large whitish bell-flowers, with wide open brims, and narrow bottoms, after which come round heads, wherein is contained three or four black seeds; if any part of this plant be broken, it yieldeth forth a milk, not hot, nor burning, nor bitter, yet somewhat unpleasant, provoking loathing, and almost casting.

NAMES. It is called *scammonia* both in Greek and Latin. The dried juice, which is most in use, is called also *scammoniacum* in the druggists and apothecaries shops, as also with most writers, and some call the plant so too. When it is prepared, that is, baked in a quince under the embers, or in an oven, or any other way, it is called *diagridium*.

PLACE AND TIME. Scammony groweth in Syria, and the farther eastern parts, where no frosts come in the winter; for where any frost comes it quickly perisheth; consequently it flourishes in hot climates only.

GOVERNMENT AND VIRTUES. This is a martial plant, and of a churlish nature, so that there had need be great care taken in the choice thereof, that only that be used in physick which is pure and without adulteration; which may be known if it be not heavy, or close compact together, but that it be moderately light, with some small holes, or hollowness, here and there, therein; and that it be smooth and plain in the breaking, and not in grains or knots, or having small sticks or stones in it; somewhat clear and blackish, but not of a deadish dark or ill-favoured colour, and that it may be made quickly into a very fine and white powder. It purgeth both phlegm, yellow choler, and watery humours, very strongly; but, if it be indiscreetly given, it will not only trouble the stomach more than any other medicine, but will also scour the guts, in working too powerfully, oftentimes unto blood, and oftentimes unto faintings and swoonings, and therefore is not fit to be given to any gentle or tender body. Mesue declareth three several hurts or dangers that come to the body thereby, and the remedies of them; the first is, saith he, that it ingendereth certain gnawing winds in the stomach, so much offending it, that it provoketh to vomit. To be baked therefore in a quince, and some parsley, fennel, or wild carrot seed,

feed, or galanga, mixed with it, is the remedy hereof. The next is, that it inflameth the spirits, by the overmuch sharpness or fierceness therein; whereby it readily induceth fevers, especially in those that are subject to obstructions, and replete with putrid humours; which inconveniences are taken away by putting those things into your decoctions that do cool and quench the heat thereof; and such are the mucilage of the seeds of psyllium, or fleawort; prunes boiled, or rather the pulp of them, the juice, or the julep, or the water, of roses or violets, or if before the boiling thereof (that is the scammony) you steep it in the oil of roses, or violets, or in the juice of a quince, and mingle it with a little shumac or spodium. A third is, that, having a strong opening and drawing faculty, it causeth immoderate fluxes of the belly, by opening the mouth of the veins more than is fit: this harm is also taken away by mixing restraining and restraining things with it, such as mastic; and especially yellow, myrobolans, and quinces, or the juice of them. Again, it raseth the intrails and guts, by reason of the sharp juice wherewith it abounds, and by which it procureth pains therein; this danger is remedied if moist, fat, and slippery, things be used with it, as *gum-tragacanth*, *bdellium*, and oil of almonds and roses, as also the pulp of prunes made up with sugar, the mucilage of fleawort seeds, mastic, and quinces, taken afterwards, and warm water last of all; all which cause it to pass the quicker from the stomach and bowels, and thereby prevents its doing harm. This fault is also helped if cold medicines as well as hot be mixed together to be given, thereby to yield help to the heart, liver, and stomach. Dioscorides saith, if the juice be applied to the womb, it destroyeth the birth, being mixed with honey and ox-gall; and, rubbed on wheals, pimples, and pushes, takes them all away: and, boiled in vinegar, and anointed, takes away the leprosy, and outward marks in the skin, being dissolved in rose-water and vinegar; and the head moistened therewith easeth the continual pains thereof. A drachm or two of the roots of scammony purge in the same manner as the juice doth, if some of the things that are appointed therewith be given in it. The roots boiled in water, and made into a poultice, with barley-meal, easeth the sciatica, being laid thereon; it taketh away scurfs and scabs if they be washed with the vinegar wherein the roots have been boiled; and also healeth imposthumes.

SEBESTEN, OR ASSYRIAN PLUMB.

DESCRIPTION AND NAMES. THE sebesten-tree groweth not so high as the plumb-tree. It is covered with a whitish bark, the branches are green, whereon grow rounder, thicker, and harder, leaves. The blossoms are white, and consist of

five leaves each, growing together on a long stalk, which afterwards turn into small berries, rather than plumbs, of a blackish green colour when they are ripe, every one standing in a little cup, of a sweet taste, and glutinous or clammy substance, and a very thick skin; within which lieth a three-square hard stone, with a thick shell and a small kernel; these are gathered and laid in the sun, whereby they grow wrinkled; and so they are kept and brought to us in boxes.

WILD SEBESTEN.

THE wild febesten is in all things like the other, but that it groweth lower, much like unto a hedge-bush, and with smaller and thinner leaves. The flowers and fruit are like, but less.

In shops they have only the name of febesten, but in Latin the tree is called *myxos* and *myxa*, and *mixaria*.

PLACE AND TIME. The first groweth in Syria, and is but planted in Egypt, whence they were brought into Italy in Pliny's time, and grafted on the service-tree, and do now grow in many places in their orchards. It is so tender that it will not endure the cold with us. The wild kind, as Alpinus saith, is natural in Egypt: they flower in May, and the fruit is ripe in September.

GOVERNMENT AND VIRTUES. This is a plant of Venus: the Arabians and Greeks hold that they open the body as much, or rather more, by reason of the mucilage in them, than the damask prunes; more however while they are green, and less when they are dry; yet the decoction of them, or the infusion of them in broth, although dried and taken whole, worketh effectually; which Fuschius denieth, and affirmeth that they are rather binding. They serve to cool any intemperate heat of the stomach or liver, and therefore are good in hot agues, and to purge cholera, whereof they come. Mathiolus saith, that ten drachms, or twelve at the most, of the pulp of sebestens taken from the skins and stones, work to as good purpose as the pulp of *cassia fistula*. They are very effectual also to lenify the hoarseness and roughness of the throat; they help the cough and wheezing of the lungs, and distillations upon them, by lenifying of the passages, and causing much phlegm to be voided. They also give ease to such as are troubled with pains in their sides, and those that are troubled with heat in their urine, and sharpness thereof proceeding from cholera or salt phlegm; they also drive forth the long worms of the belly. There is a kind of birdlime made of these fruits by boiling them a little in water to take away the skins and stones, and afterwards boiling them more to a consistence; the which

(as faith Mathiolus) was used at Venice to catch birds ; but Alpinus faith they use it in Egypt as a plaster to dissolve hard tumours or swellings.

S E N A.

DESCRIPTION. THE true sena is said to grow in Arabia and Syria, and is transported from Alexandria to us. There is a bastard sena, which is kept in many gardens with us, commonly called *colutea*, which is its Latin name.

GOVERNMENT AND VIRTUES. It is under the dominion of Mercury. The leaves of sena (which only are used) are hot near the first degree, and dry in the third ; it is of a purging faculty, but leaveth a binding quality after the purging ; it openeth obstructions, and cleanseth and comforteth the stomach, being corrected with some annise-feed, carraway-feed, or ginger ; it purgeth melancholy, choler, and phlegm, from the head and brain, lungs, heart, liver, and spleen, cleansing those parts of evil humours, a drachm thereof taken in wine, ale, or broth, fasting ; it strengthens the senses, and procureth mirth : it is also good in chronical agues, whether quartan or quotidian ; it cleanseth and purifieth the blood, and causeth a fresh and lively habit of the body, and is a special ingredient in diet drinks, and to make purging ale, to be taken to clarify and cleanse the blood. The bastard sena works very violently both upwards and downwards, offending the stomach and bowels.

S Y C A M O R E - T R E E.

KINDS. THERE are two sorts of this tree, the one bearing fruit out of the body and greater arms of the tree only, the other upon stalks without leaves. The first is called in Latin *sycomorus* and *ficus Egyptia*, the Egyptian fig-tree, and is the true sycamore-tree ; those trees which are vulgarly called sycamores in England are a kind of maples.

DESCRIPTION. 1. This sycamore groweth to be a very great tree, bigger than the mulberry-tree, with great arms and branches, full of round and somewhat long leaves, pointed at the ends, and dented about the edges, very like the leaves of the mulberry-tree ; but harder and rougher, like fig-leaves ; this beareth small figs, or fruit, and no flower, differing in that from all other trees ; for it bringeth forth the fruit out of the very body or trunk of the tree only, and the elder branches next to the body, and no where else ; and are very like unto white or wild figs, and of the same bigness ; but much sweeter, and without any kernels. The whole tree, and every part, aboundeth with milk, if the bark be but gently wounded ; but, if it be

cut too deep, it yieldeth no milk at all ; which maketh it to bear three or four times a year, new rising out of the places where the old grew. The root is solid, hard, and black, and will abide fresh long after it is felled.

2. The other sycamore is called *Sycomorus altera*, seu *ficus Cypria*, the sycamore of Cyprus. This groweth to be as big as a plumb-tree, or white poplar-tree, the arms and branches bearing broad and somewhat round leaves, like unto the elm, but very like unto the former ; this beareth such-like fruit as figs, but smaller, which rise both from the body and the greater arms, but not as the former ; but on certain stalks in branches, which rise by themselves without any leaves with them ; and are as sweet as figs. They bear four times every year, but not unless they be slit, that the milk in them may come forth.

PLACE AND TIME. The first grows chiefly in Egypt, Syria, and Arabia, and other places adjacent ; the other in Cyprus, Caria, Rhodes, and the neighbouring parts.

GOVERNMENT AND VIRTUES. These are under the particular influence of Venus. The fruit maketh the belly soluble, but by its overmuch moisture it troubles the stomach, and giveth but little nourishment. The milk that is taken from the tree by gently piercing the bark, and afterwards dried and made into troches, and kept in an earthen pot, hath a property to soften tumours, and dissolve them ; and to solder and close together the lips of green wounds. The fruit itself, being applied as a plaster, worketh the same effect.

S P I K E N A R D.

IT is naturally an Indian plant, called *Nardus Indica*, therefore I shall proceed to declare its virtues, not troubling you at all with its description.

VIRTUES. Spikenard is of a heating drying faculty, as saith Dioscorides ; it is good to provoke urine, and easeth pains of the stone in the reins and kidneys, being drunk in cold water ; it helps loathings, swelling, or gnawing, in the stomach, the yellow jaundice, and such as are liver-grown. It is a good ingredient in mithridate and other antidotes against poison : to women with child it is forbidden to be taken inwardly. The oil of spikenard is good to warm cold places, and to digest crude and raw humours ; it worketh powerfully on old cold griefs of the head and brain, stomach, liver, spleen, reins, and bladder. It purgeth the brain of rheum, being snuffed up the nostrils ; being infused certain days in wine, and then distilled in a hot bath, the water is good inwardly and outwardly to be used for any coldness of the members. It comforts the brain, and helps cold pains of the head,

head, and the shaking palsy. Two or three spoonfuls thereof, being taken, help passions of the heart, swoonings, and the cholic; being drunk with wine, it is good against venomous bitings; and, being made into troches with wine, it may be reserved for an eye medicine, which, being aptly applied, represseth obnoxious humours thereof.

STORAX-TREE.

KINDS. THERE are accounted three sorts of the storax-tree, whose names shall follow with their descriptions.

DESCRIPTION. The usual storax-tree is called in Latin *styrax arbor vulgaris*. This storax-tree groweth very like the quince-tree, both for form and bigness, the leaves also are long and round, and somewhat like, but far less: whitish underneath, and stiff, the flowers stand both at the joints with the leaves, and at the ends of the branches, consisting of five or six largewhitish leaves, like those of the orange-tree, with some threads in the middle, after which come round berries, set in the cups that the flowers were in before, of the bigness of hazel-nuts, pointed at the ends, and hoary all over; each standing on a long footstalk, containing within them certain kernels in small shells. This yieldeth a most fragrant sweet gum, and clear, of the colour of brown honey.

2. Storax with maple-leaves, *styrax folio aceris*. From a round root, covered with a crested or as it were a jointed bark, come forth, out of knots, three or five broad leaves, like those of the maple or plane-tree, standing on small blackish long stalks, and are divided in three or five parts, full of veins, dented about the edges, and pointed at the ends.

3. Red storax, called in Latin *styrax rubra*. This hath formerly by some been thought to be the bark of some kind of tree that went under the name of storax. But Serapio and Avicen, divide storax into *liquida* and *secca*: by *liquida* meaning the pure gum flowing from the tree, and not that *liquida* which we now call by that name; and by the *secca* the faeces of the expressed oil from the fruit; but *calumita* is now taken of some to be red storax.

PLACE AND TIME. The first groweth in Provence of France, in Italy, Candy, Greece, and some other parts of Turkey, where it yieldeth no gum; but in Syria, Silicia, Pamphylia, Cyprus, and those hotter countries, it groweth much. It flowereth in the spring, yielding fruit in September.

GOVERNMENT AND VIRTUES. This is a solar plant: there is no part of this tree in use with us, but the gum that issueth out of it; it is of temperature hot in the

second degree, and dry in the first; it heateth, mollifieth, and digesteth; and is good for coughs, catarrhs, distillations of rheums, and hoarseness. Pills made with it and a little turpentine, and taken, gently loosen the belly. It resisteth cold poisons; dropped into the ears, it helpeth the singings and noise in them; applied to the hips, joints, or shoulders, afflicted with cold aches, it resolveth and comforteth much, and is good to be put into baths, for lameness of the joints and weariness by travel. It is also good to be put with white frankincense to perfume those that have catarrhs, rheums, and defluxions from the head to the nose, eyes, or other parts, by casting it on quick coals, and holding the head over the smoak. It dissolveth hard tumours in any part, and is good for the king's-evil.

S W A L L O W - W O R T .

KINDS. OF this there are three kinds. The usual Latin name of swallow-wort is *asclepias* or *Venice toxicum*; their distinct names follow in their descriptions.

DESCRIPTION. 1. Swallow-wort with white flowers, *asclepias flore albo*. This swallow-wort riseth up with divers slender weak stalks, to be two or three feet long, not easy to break, scarce able to stand upright, and therefore for the most part leans or lies upon the ground, if it find not any thing to sustain it; whereon are set two leaves at the joints, being somewhat broad and long-pointed at the end; of a dark green colour, and smooth at the edges. At the joints with the leaves, towards the tops of the stalks, and at the tops themselves, come forth divers small white flowers, consisting of five pointed leaves a-piece, of a sweet scent; after which come small long pods, thick above, in a great deal of white silken down, which when the pod is ripe openeth of itself, and sheddeth both seed and cotton upon the ground, if it be not carefully gathered. The roots are a great bush, of many strings fastened together at the head, smelling somewhat strong while they are fresh and green, but more pleasant when they are dried; both leaves and stalks perish every winter, and arise anew in the spring of the year, when the stalks, at their first springing, are of a blackish brown.

2. Swallow-wort with black flowers, called in Latin *asclepias flore nigro*. This groweth in the same manner that the former doth, having long slender rough branches, rising out to a greater height than the other, and twining about whatsoever standeth next unto them; having such-like dark green leaves set by couples, but somewhat smaller, and of a dark purplish colour; after which come more plentifully such-like cods, with a white silver down and seeds in them as the former. The

roots

roots hereof are not so bushy as the other, neither smell so strong; neither doth it give any milky but a watery juice when it is broken.

3. Swallow-wort of Candy, *asclepias Cretica*. This riseth up in the same fashion that the former do, with many slender flexible green branches, with leaves set at the joints on either side, as the white kind hath, and are very like them, but somewhat of a paler white colour. The flowers stand in the same manner, three or four together upon a stalk, but are somewhat of a paler white colour; to whom succeed sometimes but one pod, and sometimes two together, thicker and shorter than those of the white kind; straked all along and double-forked at the ends, wherein lie silk and seeds as in the former; the roots have not so strong a smell as the last, and have, as well as the rest of the plant, a scent like box-leaves.

PLACE AND TIME. The two first grow in rough and untilled ground, upon divers mountains in France, about Narbonne, Marseilles, and Montpellier, and in Italy also; the last in Candy. They flower in the months of June and July, and sometimes not until August; and their pods are ripe about a month after; the empty husks abide on the dry branches, when the seed and silk are fallen out.

GOVERNMENT AND VIRTUES. These are solar plants; the roots have a most sovereign faculty against all poisons, particularly against the *apocynum*, or dog's-bane; and are effectually given to such as are bitten by any venomous beast, or stung by any serpent or other creature; as also against the biting of a mad dog, a drachm and an half thereof taken in carduus-water for many days together. It is taken also, in wine, against the plague and pestilence; a drachm taken in bugloss-water is effectual against all passions of the heart; if the same quantity of citron-seeds be taken therewith, it easeth all the griping pains in the belly; the decoction of the roots made with white wine, taken for several days together, a good draught at a time, and sweating thereupon, cureth the dropsy. The same also cureth the jaundice, provoketh urine, and easeth the cough and all defects of the chest and lungs. The powder of the roots, taken with peony-seeds, is good against the falling-sickness; or, with basil-feed, or the rind of pomelitron-seeds, is good against melancholy; and, taken with the roots of *dictamnus albus*, or bastard dittany, will kill and expel worms. The decoction hereof, with comfrey-roots, made in wine, is good for those that have a rupture, or are bursten, or have received hurts by bruises. The powder of the roots or leaves is effectual to cleanse all putrid, rotten, and filthy, ulcers and sores, and may safely be used in all salves, unguents, and lotions, made for such purposes. The leaves and flowers boiled, and made into a poultice, and applied to the hard tumours or swellings of women's breasts, cure them speedily.

TOBACCO,

TOBACCO, ENGLISH AND INDIAN.

DESCRIPTION. ENGLISH tobacco riseth up with a thick round stalk, about two feet high, whereon grow thick fat green leaves, not so large as the Indian, round-pointed, and not dented about the edges; at the tops stand divers flowers in green husks, scarce above the brims of the husk, round-pointed also, and of a greenish yellow colour. Its seed is not very bright, but large, contained in great heads. The roots perish every winter, but rise generally of its own sowing.

NAMES. It is called in Latin *petum* and *nicotiana*.

PLACE AND TIME. English tobacco groweth much about Winscomb in Gloucestershire, as delighting in a fruitful soil; the other, which we smoke, groweth best in Virginia, and is thence carried to some parts of Spain, and there made up and then brought to us, and named Spanish tobacco.

GOVERNMENT AND VIRTUES. It is a martial plant. It is found by good experience to be available to expectorate tough phlegm from the stomach, chest, and lungs; the juice thereof being made into a syrup, or the distilled water of the herb drunk; or the smoke taken by a pipe as is usual, but fasting. The same helpeth to expel worms in the stomach and belly, and to ease the pains in the head, and the griping pains in the bowels; it is profitable for those that are troubled with the stone in the kidneys, to ease pains, and, by provoking urine, to expel gravel and the stone; and hath been found very effectual to expel wind. The seed hereof is very effectual to help the tooth-ach, and the ashes of the burnt herb to cleanse the gums and make the teeth white. The herb bruised, and applied to the place grieved with the king's evil, helpeth it in nine or ten days effectually. Monardus saith it is a counter poison for the biting of any venomous creature; the herb also being outwardly applied to the hurt place. The distilled water is often given with some sugar before the fit of an ague to lessen it, and takes it away in three or four times using. If the distilled fæces of the herb, having been bruised before the distillation, and not distilled dry, be set in warm dung for fourteen days, and afterwards hung up in a bag in a wine-cellar, the liquor that distils therefrom is singularly good for cramps, aches, the gout and sciatica, and to heal itches, scabs, and running ulcers. The juice is also good for all the said griefs, and likewise to kill lice in children's heads. The green herb, bruised and applied, cureth any fresh wound or cut whatsoever: and the juice, put into old sores, both cleanseth and healeth them. There is also made hereof a singular good salve to help imposthumes, hard tumours, and swellings, by blows or falls.

TAMARISK.

TAMARISK-TREE.

IT is so well known in the place where it grows, that it needeth no description.

TIME. It flowereth about the end of May, or in June, and the seed is ripe and blown away in the beginning of September.

GOVERNMENT AND VIRTUES. It is under the dominion of Saturn. If the root, leaves, or young branches, be boiled in wine or vinegar, and drunk, and applied outwardly, it is very powerful against the hardness of the spleen. The leaves, boiled in wine and drunk, are good to stay the bleeding of the hemorrhoidal veins, spitting of blood, and helpeth the jaundice, the cholic, and the bitings of all venomous serpents except the asp. The bark is as effectual, if not more, to all the purposes aforesaid; and both it and the leaves boiled in wine, and the mouth and the teeth washed therewith, help the tooth-ach, the ear-ach, and the redness and watering of the eyes. The said decoction, with some honey put thereto, is good to stay gangrenes and fretting ulcers, and to wash those that are subject to nits and lice. The wood is very effectual to consume the spleen, and therefore to drink out of cups and cans made thereof is good for splenetic persons. The ashes of the wood are used for all the purposes aforesaid; and, besides, do quickly help the blisters raised by burnings or scaldings by fire or water. Alpinus and Veslingius affirm, that the Egyptians do with as good success use the wood hereof to cure the French disease as others do lignum vitæ or guaiacum; and give it also to such as are possessed with the leprosy, scabs, pushes, ulcers, or the like; and it is available also to help the dropsy arising from the hardness and obstruction of the spleen, as also for melancholy, and the black jaundice, that ariseth thereof.

GARDEN TANSEY*.

GARDEN TANSEY is so well known, that it needeth no description.

TIME. It flowereth in June and July.

* It is an agreeable bitter; a carminative, and a destroyer of worms: and it is in this last capacity that it is principally to be regarded.

No complaint is so frequent, and few bring on so much mischief: besides the more common and obvious disorders which they occasion, a wasting, even to death, and putrid fevers, sometimes accompany, and indeed arise from, them; and, oftener than is thought, they are the cause of epileptic fits. The medicines given against them are for the most part ineffectual, and many of them mischievous. Hellebore has brought on convulsions; and every one knows the danger of mercurials.

GOVERNMENT AND VIRTUES. Venus governs this herb. The herb bruised, and applied to the navel, stays miscarriages; boiled in ordinary beer, and the decoction drunk, it doth the like; also, it consumes those phlegmatic humours which the cold and moist constitution of winter usually infects the body with, and that was the first reason of eating tansey in the spring. The decoction of the common tansey, or the juice drunk in wine, is a singular remedy for all the griefs that come by stopping of the urine, helpeth the stranguary, and those that have weak reins and kidneys. It is very profitable to dissolve and expel wind in the stomach, belly, or bowels. If it be bruised, and often smelled to, as also applied to the lower part of the belly, it is very profitable for such women as are given to miscarry in child-bearing, to cause them to go out their full time; it is used also against the stone in the reins, especially to men. The herb fried with eggs, which is called a tansey, helpeth to digest, and carry downward, those bad humours that trouble the stomach. The seed is very profitably given to children for worms, and the juice in drink is as effectual. Being boiled in oil, it is good for the sinews shrunk by cramps, or pained with cold.

WILD TANSEY, OR SILVER-WEED:

THIS is so well known, that it needeth no description.

PLACE. It groweth almost in every place.

TIME. It flowereth in June and July.

GOVERNMENT AND VIRTUES. This is likewise an herb of Venus. Wild tansey stayeth the lask, and all the fluxes of blood, in men or women, which some say it will do if the green herb be worn in the shoes, so it be next the skin; it stayeth also spitting or vomiting of blood. It is much commended to help children that are bursten, and have a rupture, being boiled in water and salt. Being boiled in wine and drunk, it easeth the griping pains of the bowels, and is good for the sciatica and joint-achs. The same boiled in vinegar with honey and allum, and gargled in the mouth, easeth the pains of the tooth-ach, fasteneth loose teeth, helpeth the gums that are sore, and setteth the palate of the mouth in its place when it is fallen down. It cleanseth and healeth the ulcers in the mouth or secret parts, and is very good for inward wounds, and to close the lips of green wounds; as also to heal old, moist, corrupt, running, sores, in the legs or elsewhere. Being bruised and applied to the soles of the feet, and the wrists, it wonderfully cooleth the hot fits of agues, be they never so violent. The distilled water cleanseth the skin of all discolourings therein, as morpew, sun-burning, &c. as also pimples, freckles, and the like; and, dropped

into

into the eyes, or cloths wet therein and applied, taketh away the heat and inflammations in them.

T H I S T L E S.

OF these are many kinds growing here in England, which are so well known, that they need no description. Their difference is easily known by the places where they grow, viz.

PLACE. Some grow in fields, some in meadows, and some among the corn; others on heaths, greens, and waste grounds, in many places.

TIME. They all flower in July and August, and their seed is ripe quickly after.

GOVERNMENT AND VIRTUES. Mars rules them. Thistles are good to provoke urine, and to amend the rank smell of the armpits, or of the whole body, being boiled in wine and drunk; and are said also to help a stinking breath, and to strengthen the stomach. Pliny saith, that the juice bathed on the place that wanteth hair, it being fallen off, will cause it to grow again speedily.

THE MELANCHOLY THISTLE.

DESCRIPTION. IT riseth up with a tender single hoary green stalk, bearing thereon four or five long hoary green leaves, dented about the edges, the points whereof are little or nothing prickly, and at the top usually but one head, yet sometimes from the bosom of the uppermost leaf there shooteth forth another smaller head, scaly and somewhat prickly, with many reddish purple thrums in the middle, which, being gathered fresh, will keep the colour a great while, and fade not from the stalk in a long time, while it perfecteth the seed. The root hath many long strings fastened to the head, or upper part, which is blackish, and perisheth not.

There is another sort, little differing from the former, but that the leaves are more green above and more hoary underneath, and the stalk, being about two feet high, bearing but one large scaly head, with threads and feeds as the former.

PLACE. They grow in many moist meadows of this land, as well in the southern as in the northern parts.

TIME. They flower about July or August, and their seed ripeneth quickly after.

GOVERNMENT AND VIRTUES. It is under Capricorn, and therefore under both Saturn and Mars; one rid's melancholy by sympathy, the other by antipathy. Their virtues are but few, but those not to be despised; for the decoction of the
thistle

thistle in wine, being drunk, expels superfluous melancholy out of the body, and makes a man merry. Superfluous melancholy causeth care, fear, sadness, despair, envy, and many evils besides; but religion teacheth to wait upon Providence, and cast our care upon him who careth for us.

OUR LADY'S THISTLE.

DESCRIPTION. OUR LADY's thistle hath divers large and broad leaves, lying on the ground, cut in and as it were crumbled, but rather hairy on the edges; of a white green shining colour, wherein are many lines and strakes of a milky white colour running all over, and set about with many sharp and stiff prickles, among which riseth up one or more strong, round, and prickly, stalks, set full of the like leaves up to the top, where, at the end of every branch, cometh forth a great, prickly, thistle-like, head, strongly armed with pricks, and with bright purple thrums rising out of the middle of them; after they are past, the seed groweth in the said heads, lying in a great deal of soft white down, which is somewhat flattish and shining, large and brown. The root is great, spreading in the ground, with many strings and small fibres fastened thereto. All the whole plant is bitter in taste.

PLACE. It is frequent on the bank of almost every ditch.

TIME. It flowereth and seedeth in June, July, and August.

GOVERNMENT AND VIRTUES. Our lady's thistle is under Jupiter, and thought to be as good as carduus benedictus for agues, and to prevent and cure the infection of the plague, as also to open obstructions of the liver and spleen, and thereby is good against the jaundice. It provoketh urine, breaketh and expelleth the stone, and is good for the dropsy. It is effectual also for the pains in the sides, and many other inward pains and gripings. The seed and distilled water are held powerful to all the purposes aforesaid: and, besides, it is often applied both inwardly to drink, and outwardly with cloths or sponges to the region of the liver, to cool the distemperature thereof, and to the region of the heart, against swoonings and passions of it. It cleanseth the blood exceedingly: and in spring, if you boil the tender plant, it will change your blood as the season changes, which is a very sure way to preserve health.

WOOLLY OR COTTON THISTLE.

DESCRIPTION. THIS hath many large leaves lying on the ground, somewhat cut in, and as it were crumpled, on the edges, of a green colour on the upper side, but covered over with a long hairy wood, or cottony down, set with sharp pricks; from

from the middle of whose heads of flowers come forth many purplish crimfon threads, sometimes white, although but feldom. The feed, that followeth in thefe white downy heads, is fomewhat large, long, and round, refembling the feed of our lady's-thiftle, but paler. The root is great, and thick, fpreading much, yet ufually dieth after feed-time.

PLACE: It groweth on divers ditch-banks, and in the corn-fields, and highways, generally throughout England; and is often found growing in gardens.

TIME. It flowereth and beareth feed about the end of fummer, when other thiftles flower and feed.

GOVERNMENT AND VIRTUES. It is a plant of Mars. Dioscorides and Pliny write, that the leaves and roots hereof, taken in drink, help thofe that have a crick in their neck, that they cannot turn it unlefs they turn their whole body. Galen faith, that the roots and leaves hereof are good for fuch perfons as have their bodies drawn together by fome fpafm or convulfion, or other infirmities, as the rickets in children; being a difeafe that hindereth their growth, by binding their nerves, ligaments, and whole ftructures of their body.

FULLERS THISTLE, OR TEASEL*.

IT is fo well known, that it needs no defcription, being ufed by the cloth-workers.

The wild tealfe is in all things like the former, but that the prickles are fmall, foft, and upright, not hooked or ftiff: and the flowers of this are of a fine blufh or pale carnation colour, but of the manured kind whitifh.

PLACE: The firft groweth, being fown, in gardens or fields, for the ufe of cloth-workers. The other near ditches in many places of Great Britain.

TIME They flower in July, and are ripe near the end of Auguft.

GOVERNMENT AND VIRTUES. It is an herb of Venus. Dioscorides faith, that the root bruifed and boiled in wine until it be thick, add kept in a brazen vefel or pot, and after fpread as a falve and applied, doth heal fifulas, and alfo taketh away warts and wens. The juice of the leaves, dropped into the ears, killeth worms in them. The diftilled water of the leaves, dropped into the eyes, taketh away rednefs and mifts in them that hinder the fight, and is often ufed by women to preferve their beauty, and to take away rednefs and inflammations, and all other difcolourings.

* The water, that is received in the hollownefs of the leaves, is good for inflammations of theeyes. It alfo takes off fpoats from the face, and beautifies it. Boiled in wine, it purges by urine.

T R E A C L E - M U S T A R D.

DESCRIPTION. IT riseth up with a hard round stalk about a foot high, parted into some branches, having divers soft green leaves somewhat long and narrow set thereon, waved, but not cut in on the edges, broadest towards the ends, and somewhat round-pointed; the flowers are white that grow at the tops of the branches, spike-fashion, one above another: after which come large round pouches parted in the middle with a furrow, having one blackish brown seed on either side, somewhat sharp in taste, and smelling of garlic, especially in the fields where it is natural, but not so much in gardens: the roots are small and thready, perishing every year.

B L A C K - T H O R N, O R S L O E - B U S H.

IT is so well known, that it needeth no description.

PLACE. It groweth in every country, in the hedges and borders of fields.

TIME. It flowereth in April, and sometimes in March, but ripeneth after all other plumbs whatsoever, and is not fit to be eaten until the autumn frost have melowed it.

GOVERNMENT AND VIRTUES. All the parts of the sloe-bush are binding, cooling, and drying, and effectual to stay the bleeding at the nose and mouth, or any other place; the lask of the belly, or stomach, or the bloody flux, and to ease the pains in the sides or bowels, by drinking the decoction of the bark of the roots, or more usually the decoction of the berries, either fresh or dried. The conserve is also of very much use to the purposes aforesaid; but the distilled water of the flowers, first steeped in sack for a night, and drawn therefrom by the heat of a *bath*, is a most certain remedy, tried and approved, to ease all manner of gnawing in the stomach, sides, and bowels, or any griping pains in any of them, to drink a small quantity when the extremity of pain is upon them. The leaves also are good to make lotions, to gargle and wash the mouth and throat, wherein are swellings, sores, or kernels, and to stay the defluxions of rheum to the eyes or other parts, as also to cool the heat and inflammations in them, and to ease hot pains of the head, by bathing the forehead and temples therewith. The simple distilled water of the flowers is very effectual for the said purposes, and the condensate juice of the sloes. The distilled water of the green berries is used also for the same purposes.

THOROUGH-

THOROUGH-WAX, OR THOROUGH-LEAF.

DESCRIPTION. COMMON thorough-wax sendeth forth one straight round stalk, and sometimes more, two feet high and better, whose lower leaves, being of a bluish green colour, are smaller and narrower than those up higher, and stand close thereto, not compassing it, but, as they grow higher, they more and more encompass the stalk, until it wholly (as it were) pass through them, branching towards the top into many parts, where the leaves grow smaller again, every one standing singly. The flowers are very small and yellow, standing in tufts at the heads of the branches, where afterwards grow the seed, and blackish, many thick thrust together. The root is small, long, and woody, perishing every year after seed-time, and rising again plentifully of its own sowing.

PLACE. It is found growing in many corn-fields and pasture-grounds in Great Britain.

TIME. It flowereth in July, and the seed is ripe in August.

GOVERNMENT AND VIRTUES. Both this and the former are under the influence of Saturn. Thorough-wax is of singular good use for all sorts of bruises and wounds, either inward or outward, and old ulcers and sores likewise, if the decoction of the herb with water or wine be drunk, and the places washed therewith, or the juice, or green herb bruised or boiled, either by itself or with other herbs, in oil or hog's grease, to be made into an ointment to serve all the year. The decoction of the herb, or the powder of the dried herb, taken inwardly, and the same, or the green leaves, bruised and applied outwardly, is singular good to cure ruptures and burstings, especially in children, before they be too old.

T H Y M E.

IT is very unnecessary to describe an herb so commonly known.

GOVERNMENT AND VIRTUES. It is under the government of Venus. This herb is a notable strengthener of the lungs; there is scarcely a better remedy growing for that disease in children which they commonly call the chin-cough. It purgeth the body of phlegm, and is an excellent remedy for shortness of breath: it kills worms in the belly. An ointment made of it takes away hot swellings and warts, helps the sciatica and dulness of sight, takes away pains and hardness of the spleen. It is excellent good for those that are troubled with the gout; it easeth pains in the loins and hips. The herb taken any way inwardly comforts the stomach much, and expels wind.

WILD

WILD THYME, OR MOTHER of THYME.

THE wild thyme also is so well known, that it needs no description.

PLACE. It may be found in commons and other barren places throughout the nation.

GOVERNMENT AND VIRTUES. This is likewise under the dominion of Venus, though under the sign Aries, and therefore chiefly appropriated to the head: it provoketh urine, and easeth the griping pains of the belly, cramps, ruptures, and inflammations of the liver. If you make a vinegar of the herb, and anoint the head with it, it will soon ease the pain thereof. It is excellent good to be given either in a frenzy or lethargy, although they are two contrary diseases. It helps the spitting of blood, coughing, and vomiting; it comforts and strengthens the head, stomach, reins, and womb; expels wind, and breaks the stone.

TORMENTIL, OR SEPTFOIL.

DESCRIPTION. THIS hath many reddish, slender, weak, branches, rising from the root, lying upon the ground, rather leaning than standing upright, with many short leaves that stand closer to the stalks than cinquefoil doth, (which this is very like,) with the footstalk encompassing the branches in several places; but those that grow next to the ground are set upon long footstalks, each whereof are like the leaves of cinquefoil, but somewhat longer and smaller, and dented about the edges, many of them divided into five leaves only, but most of them into seven, whence it is also called septfoil; yet some may have six, and some eight, according to the fertility of the soil. At the tops of the branches stand divers small yellow flowers, consisting of five leaves, like those of cinquefoil, but smaller. The root is smaller than bistort, somewhat thick, but blacker without, and not so red within, yet sometimes a little crooked, having many blackish fibres.

PLACE. It groweth as well in woods and shadowy places as in the open country, about the borders of fields in many places of England, and almost in every broom-field in Essex.

TIME. It flowereth all the summer.

GOVERNMENT AND VIRTUES. This is an herb of the Sun. Tormentil is most excellent to stay all kinds of fluxes of blood or humours in man or woman, whether at nose, mouth, belly, or any wound in the veins or elsewhere. The juice of the herb or root, taken in drink, not only resisteth all poison or venom of any creature, but of the plague itself, and pestilential fevers, and contagious diseases, as the French

disease, measles, purples, &c. expelling the venom and infection from the heart by perspiration; if the green root be not to be had, the powder of the dry root is as effectual, a drachm thereof being taken every morning. The decoction likewise of the herb and roots made in wine, and drunk, worketh the same effect; and so doth the distilled water of the herb and root, being steeped in wine for a night, and then distilled in *balneo marie*. The water thus distilled, taken with some Venice treacle, and the party presently laid to swear, will expel any venom or poison, or the plague, fever, &c. for it is an ingredient of especial respect in all antidotes or counter-poisons. There is not found any root more effectual to help any flux of the belly, stomach, spleen, or blood, than this, to be taken inwardly, or applied outwardly. The juice doth wonderfully open obstructions of the liver and lungs, and thereby in short space helpeth the yellow jaundice: some make cakes hereof, as well to stay all fluxes as to restrain all cholerick belchings, and much vomiting, with loathing. Andreas Valesius is of opinion, that the decoction of this root is no less effectual to cure the venereal disease than guaiacum; and it is not unlikely, because it so mightily resisteth putrefaction. Lobel saith, that Rondeletius used it as hermodactils for joint-aachs: the powder also, or decoction to be drunk, or to sit therein as a bath, is a fine remedy against abortion in women, if it proceed from the weakness of the inward retentive faculty: as also a plaster made therewith and vinegar, applied to the reins of the back, doth much help, not only this, but also those that cannot hold their water, the powder being taken in the juice of plantane; and it is also commended against the worms in children. It is very powerful in ruptures and burstings; as also for bruises and falls, to be used as well outwardly as inwardly. The root hereof, made up with pellitory of Spain and allum, and put into an hollow tooth, not only assuageth pain, but stayeth the flux of humours which caused it. Tormentil is no less effectual and powerful a remedy for outward wounds, sores, and hurts, than for inward, and is therefore a special ingredient in wound-drinks, lotions and injections for foul, corrupt, rotten, sores and ulcers of the mouth, or any other parts of the body; and to put either the juice or powder of the root into such ointments, plasters, and such things as are to be applied to wounds and sores. It also dissolveth all knots, kernels, and hardness, about the ears, throat, and jaws; and the king's evil, if the leaves and roots be bruised and applied thereto. The same also easeth the pains of the sciatica, or hip-gout, by restraining the sharp humours that flow thereto. The juice of the leaves and roots, used with a little vinegar, is also a special remedy against the running sores of the head or other parts, scabs also, and the itch, or any such eruptions in the skin, proceeding of salt and sharp humours. The same also is effectual for the piles, or hemorrhoids, if they be washed and bathed therewith, or

with the distilled water of the herb and roots. It is found also helpful to dry up any sharp rheum that distilleth from the head into the eyes, causing, redness, pain, waterings, itchings, or the like, if a little prepared tutia, or white amber, be used with the distilled water thereof. The Sun rules this herb.

TURNSOL, OR HELIOTROPIUM.

DESCRIPTION. THE greater turnsol riseth up with one upright stalk about a foot high or more, dividing itself almost from the bottom into smaller branches of a hoary colour. At each joint of the stalk and branches grow two small broad leaves, somewhat white or hoary also. At the tops of the stalks and branches stand many small white flowers, consisting of four and sometimes five very small leaves, set in order one above another, upon a small crooked spike, which turneth inwards, opening by degrees as the flowers blow open; after which in their places come forth small cornered feeds, four for the most part standing together. The root is small and thready, perishing every year; and the seed, shedding every year, raiseth it again the next spring.

PLACE. It groweth in gardens, and flowereth and seedeth with us in England, notwithstanding it is not natural to Great Britain, but to Italy, Spain, and France, where it groweth plentifully.

GOVERNMENT AND VIRTUES. It is an herb of the Sun Diofcorides saith, that a good handful of this, which is called the greater turnsol, boiled in water and drunk, purgeth both choler and phlegm; and, boiled with cummin, and drunk, helpeth the stone in the reins, kidneys, or bladder, provoketh urine and the courses, and causeth an easy and speedy delivery in child-birth. The leaves bruised and applied to places pained with the gout, or that have been newly set, do give much ease. The seed and the juice of the leaves also, being rubbed with a little salt upon warts, wens, and other hard kernels, in the face, eye-lids, or any other part of the body, will, by often using, take them away.

MEADOW TREFOIL, OR HONEY-SUCKLES.

IT is so well known, especially by the name of honey-suckles, white and red, that I need not describe them.

PLACE. They grow almost every where in England.

GOVERNMENT AND VIRTUES. Mercury hath dominion over the common sorts. Dodonæus saith, the leaves and flowers are good to ease the griping pains of the guts,

guts, the herb being boiled and used in a clifter. If the herb be made into a poultice and applied to inflammations, it will ease them. The juice dropped into the eyes is a familiar medicine with many country people to take away the pin and web (as the call it) in the eyes; it also allayeth the heat and blood-shooting of them. Country people do also in many places drink the juice hereof against the biting of an adder, and, having boiled the herb in water, they first wash the place with the decoction, and then lay some of the herb to the hurt place. The herb also, boiled in swines greafe, and so made into an ointment, is good to apply to the biting of any venomous creature. It is held likewise to be good for wounds. The seed and flowers boiled in water, and after made into a poultice with some oil and applied, help hard swellings and imposthumes.

HEART TREFOIL.

BESIDES the ordinary sorts of trefoil, here are two more remarkable, and one of which may probably be called heart trefoil, not only because the leaf is triangular like the heart of a man, but also because each leaf contains the perfect icon of a heart, and that in its proper colour, viz. a flesh colour.

PLACE. It groweth near Bow, and parts adjacent.

GOVERNMENT AND VIRTUES. It is under the dominion of the Sun, and, if it were used, it would be found as great a strengthener of the heart and cherisher of the vital spirit as grows, relieving the body against faintings and swoonings, fortifying it against poisons and pestilence, and defending the heart against the noisome vapours of the spleen.

PEARL TREFOIL.

IT differs not from the common sort, save only in this one particular, that it hath a white spot in the leaf like a pearl; it is particularly under the dominion of the Moon, and its icon sheweth that it is of singular virtue against the pearl, or pin and web, in the eye.

TUTSAN, OR PARK-LEAVES.

DESCRIPTION. IT hath brownish shining stalks, crested all the length thereof, rising to be two and sometimes three feet high, branching forth even from the bottom, having divers joints, and at each of them two fair large leaves, of a dark bluish green colour on the upper side, and of a yellowish green underneath, turning

ing reddish towards autumn, but abiding on the branches all the winter. At the tops of the stalks and branches stand large yellow flowers, and heads with seed, which, being greenish at the first, and afterwards reddish, turn to be of blackish purple colour when they are thoroughly ripe, with small brownish seed within them, and then yield a reddish juice or liquor, of a reasonable good scent, somewhat resinous, and of an harsh and styptic taste, as the leaves also and the flowers be, although much less. The root is of a brownish colour, somewhat great, hard, and woody, spreading well in the ground.

PLACE. It groweth in many woods, groves, and woody grounds, as parks and forests, and by hedge sides, in many places in Great Britain.

TIME: It flowereth later than St. John's or St. Peter's wort.

GOVERNMENT AND VIRTUES. It is an herb of Saturn, and a great antivenerean. Tutstan purgeth cholerick humours, as St. Peter's wort is said to do, for therein it worketh the same effects, both to help the sciatica and gout, and to heal burnings by fire. It stayeth also the bleeding of wounds, if either the green herb be bruised, or the powder of the dry be applied thereto. It hath been accounted, and certainly is, a sovereign herb to heal any wound or sore either outwardly or inwardly, and therefore always used in drinks, lotions, balms, oils, ointments for any sort of green wound, or old ulcers and sores, in all which the continual experience of former ages hath confirmed the use thereof to be admirably good, though it be not so much in use now as when physicians and surgeons were so wise as to use herbs more than now they do.

GARDEN VALERIAN.

DESCRIPTION. THIS hath a thick short greyish root, lying for the most part above ground, shooting forth on all sides other such-like small pieces or roots, which have all of them many long and great strings or fibres under them, in the ground, whereby it draweth nourishment. From the heads of these roots spring up many green leaves, which at first are somewhat broad and long, without any division at all in them, or denting on the edges; but those that rise up after are more and more divided on each side, some to the middle rib, made of many leaves together on a stalk, and those upon the stalk in like manner are more divided, but smaller towards the top than below. The stalk riseth to be a yard high or more, sometimes branched at the top, with many small whitish flowers, sometimes dashed over at the edges with a pale purplish colour, of a little scent; which passing away, there followeth small brownish white seed that is easily carried away with the wind. The root smelleth more strong than either leaf or flower, and is of more use in medicine.

PLACE. It is generally kept with us in our gardens.

TIME. It flowereth in June and July, and continueth flowering until the frost pull it down.

GOVERNMENT AND VIRTUES. This is under the influence of Mercury. Dioscorides saith, that the garden valerian hath a warming faculty, and that, being dried and given to drink, it provoketh urine, and helpeth the strangury. The decoction thereof, likewise taken, doth the like also, and taketh away pains of the sides, provoketh urine, and helpeth the strangury. It is used as a counter-poison. Pliny saith, that the powder of the root, given in drink, or some of the decoction thereof taken, helpeth all stoppings and stranglings in any part of the body, whether they proceed of pains in the chest or sides, and taketh them away. The root of valerian, boiled with liquorice, raisins, and annise-seed, is good for those that are short winded, and for those that are troubled with a cough, and helpeth to open the passages, and to expectorate phlegm easily. It is given to those that are bitten or stung by any venomous creature, being boiled in wine. It is of special virtue against the plague, the decoction thereof being drunk, and the root being used to smell to; it helpeth also to expel wind. The green herb with the root taken fresh, being bruised and applied to the head, taketh away the pains and prickings therein, stayeth rheum and thin distillations; and, being boiled in white wine, and a drop thereof put into the eye, taketh away the dimness of the sight, or any pin or web therein. It is of excellent property to heal any inward sores or wounds, as also for outward hurts or wounds, and draweth any splinter or thorns out of the flesh.

V E R V A I N.

DESCRIPTION. THE common vervain hath somewhat long and broad leaves next the ground, gashed about the edges, and some only deeply dented, or cut all alike, of a blackish green colour on the upper side, and somewhat grey underneath. The stalk is square, branched into several parts, rising about two feet high, especially if you reckon the long spike of flowers at the tops of them, which are set on all sides one above another, and sometimes two or three together, being small and gaping, of a purplish blue colour, and white intermixed; after which come small round seed in small and somewhat long heads. The root is small and long, but of no use.

PLACE. It groweth generally throughout England, in divers places by the hedges, and way-sides, and other waste grounds.

TIME. It flowereth about July, and the seed is ripe soon after.

GOVERNMENT AND VIRTUES. This also is an herb of Venus, and an excellent herb for the womb, to strengthen it, and remedy all the cold griefs of it, as plantane doth the hot. The herb bruised and hung about the neck, helps the head-ach. Vervain is hot and dry, bitter, opening obstructions, cleansing and healing. It helpeth the yellow jaundice, the dropfy, and the gout, the defects of the reins and lungs, and generally all inward pains and torments of the body, the leaves being boiled and drunk. The same is held to be good against the bitings of serpents, and other venomous beasts; and against the plague, and both tertian and quartan agues; killeth and expelleth worms in the belly, and causeth a good colour in the face and body; strengtheneth as well as correcteth the diseases of the stomach and lungs, coughs, shortness of breath, and wheezings, and is singular good against the dropfy, to be drunk with some peony-seed bruised and put thereto; and is no less prevalent for the defects of the reins and bladder, to cleanse them of those humours that ingender the stone; and helpeth to break the stone, and to expel gravel. It consolidateth and healeth also all wounds both inward and outward, and stayeth bleedings; and, used with some honey, healeth all old ulcers and fistulas in the legs or other parts of the body, as also those ulcers that happen in the mouth; or, used with old hogs grease, it helpeth the swellings and pains of the secret parts in man or woman, as also the piles and hemorrhoids. Applied with some oil of roses and vinegar unto the forehead and temples, it easeth the inveterate pains and aches of the head. The leaves bruised, or the juice of them mixed with some vinegar, doth wonderfully cleanse the skin, and taketh away morphew, freckles, and other such-like inflammations and deformities of the skin in any part of the body. The distilled water of the herb, when it is in its full strength, dropped into the eyes, cleanseth them from films, clouds, or mists, that darken the sight, and wonderfully strengtheneth the optic nerves. The said water is very powerful in all the diseases aforesaid either inward or outward, whether they be old corroding sores, or green wounds.

V I N E.

VIRTUES. THE leaves of the English vine, being boiled, make a good lotion for sore mouths; being boiled with barley-meal into a poultice, it cools inflammations of wounds; the droppings of the vine when it is cut in the spring, which country people call tears, being boiled into a syrup with sugar, and taken inwardly, are excellent to stay women's longings; also the tears of the vine drunk, two or three spoonfuls at a time, break the stone in the bladder. This is a very good remedy; but
the

the salt of the leaves is held to be better. The ashes of the burnt branches will make teeth that are black as a coal to beas white as snow, if you do but every morning rub them with it. It is a tree of the Sun, very sympathetical with the body of man.

V I O L E T S.

BOTH the tame and wild are so well known, that they need no description.

TIME. They flower until the end of July, but are best in March and the beginning of April.

GOVERNMENT AND VIRTUES. They are a fine pleasing plant of Venus, of a mild nature, no way harmful. All the violets are cold and moist while they are fresh and green, and are used to cool any heat or distemperature of the body either inwardly or outwardly, as inflammations in the eyes, &c. imposthumes also, and hot swellings, to drink the decoction of the leaves or flowers made with water in wine, or to apply them poultice-wise to the grieved place; it likewise easeth pains in the head caused through want of sleep, being applied in the same manner, or with oil of roses. A drachm-weight of the dried leaves or flowers of violets (but the leaves more strongly) doth purge the body of cholerick humours, and assuageth the heat, being taken in a draught of wine or any other drink. The powder of the purple leaves of the flowers only, picked and dried, and drunk in water, is said to help the quinsy, and the falling sickness in children, especially in the beginning of the disease. The flowers of the white violets ripen and dissolve swellings.

V I P E R S B U G L O S S.

DESCRIPTION. **THIS** hath many long rough leaves lying on the ground, from among which rise up divers hard round stalks, very rough as if they were thick set with prickles or hairs, whereon are set long, rough, hairy, or prickly, sad-green, leaves, somewhat narrow, the middle rib for the most part being white. The flowers stand at the top of the stalks, branched forth into many long spiked leaves of flowers, bowing or turning like the turnsol, all of them opening for the most part on the one side, which are long and hollow, turning up the brims a little, of a purplish violet colour in them that are fully blown, but more reddish while they are in the bud, as also upon their decay and withering; but in some places of a paler purple colour, with a long pointel in the middle, feathered or parted at the top. After the flowers are fallen, the seeds, growing to be ripe, are blackish, cornered, and pointed somewhat

somewhat like the head of a vine. The root is somewhat great, and blackish, and woolly, when it groweth toward seed-time; and perisheth in the winter.

There is another sort, little differing from the former, only in that it beareth white flowers.

PLACE. The first groweth wild almost every where. That with white flowers about Lewes, in Suffex.

TIME. They flower in summer, and their seed is ripe quickly after.

GOVERNMENT AND VIRTUES. This is an herb of the Sun. It is an especial remedy against the biting of the viper and all other venomous beasts or serpents, as also against poison and poisonous herbs. Dioscorides and others say, that whosoever shall take of the herb or root before they be bitten shall not be hurt by the poison of any serpent. The roots or seed are thought to be most effectual to comfort the heart, and expel sadness, or cause less melancholy; it tempers the blood, and allayeth hot fits of agues. The seed drunk in wine procureth abundance of milk in women's breasts. The same also easeth the pains in the loins, back, and kidneys. The distilled water of the herb when it is in flower, is excellent to be applied, either inwardly or outwardly, for all the griefs aforesaid. There is a syrup made thereof, very effectual for comforting the heart, and expelling sadness and melancholy.

WALL-FLOWERS, OR WINTER GILLY-FLOWERS.

THE garden kinds are so well known, that they need no description.

DESCRIPTION. The common single wall-flowers, which grow wild abroad, have sundry small, long, narrow, and dark-green, leaves, set without order upon small round whitish woody stalks, which bear at the tops divers single yellow flowers one above another, every one having four leaves a-piece, and of a very sweet scent: after which come long pods containing reddish seed. The root is white, hard, and thready.

PLACE. It groweth upon church walls, and other stone walls in divers places. The other sorts in gardens only.

TIME. All the single kinds do flower in the end of autumn, and, if the winter be mild, especially in the months of February, March, and April, and until the heat of the spring do spend them; but the double kinds continue not flowering in that manner all the year long, although they flower very early sometimes, and in some places very late.

GOVERNMENT AND VIRTUES. The Moon rules them. Galen, in his seventh book of simple medicines, saith, that the yellow wall-flowers work more powerfully than any of the other kinds, and are therefore of more use in physick. They cleanse the blood and free the liver and reins from obstructions, stay inflammations and swellings, comfort and strengthen any weak part, or out of joint; help to cleanse the eyes from mistiness and films, and to cleanse foul and filthy ulcers in the mouth, or any other part, and are a singular remedy for the gout, and all aches and pains in the joints and sinews. A conserve made of the flowers is used for a remedy both for the apoplexy and palsy.

W A L N U T - T R E E.

IT is so well known, that it needeth no description.

TIME. It blossometh early, before the leaves come forth; and the fruit is ripe in September.

GOVERNMENT AND VIRTUES. This is a plant of the Sun; let the fruit of it be gathered accordingly, which you shall find to be of most virtue whilst they are green, before they have shells. The bark of the tree doth bind and dry very much, and the leaves are much of the same temperature; but the leaves, when they are older, are heating and drying in the second degree, and harder of digestion than when they are fresh, which by reason of their sweetness are more pleasing and better digesting in the stomach; and, taken with sweet wine, they move the belly downwards; but, being old, they grieve the stomach, and in hot bodies cause choler to abound, and the head-ach, and are an enemy to those that have a cough; but are less hurtful to those that have colder stomachs, and are said to kill the broad worms in the belly or stomach. If they be taken with onions, salt, and honey, they help the biting of a mad dog, or the venom or infectious poison of any beast, &c. Cneus Pompeius found in the treasury of Mithridates, king of Pontus, when he was overthrown, a scroll of his own hand-writing, containing a medicine against any poison and infection, which is this: take two dry walnuts, and as many good figs, and twenty leaves of rue, bruised and beaten together with two or three corns of salt, and twenty juniper-berries; which, taken every morning fasting, preserveth from danger of poison or infection that day it is taken. The juice of the outer green husks, boiled up with honey, is an excellent gargle for sore mouths, the heat and inflammations in the throat and stomach. The kernels, when they grow old, are more oily, and therefore not so fit to be eaten, but are then used to heal the wounds of the sinews, gangrenes, and carbuncles. The said kernels, being burned, are then very astringent, and will

then stay lasks and women's courfes, being taken in red wine; and stay the falling of the hair, and make it fair, being anointed with oil and wine. The green husks will do the like, being used in the same manner. The kernels, beaten with rue and wine, being applied, help the quinsy; and, bruised with honey, and applied to the ears, ease the pains and inflammations of them. A piece of the green husk, put into a hollow tooth, easeth the pain. The oil that is pressed out of the kernels is very profitably taken inwardly, like oil of almonds, to help the cholic, and to expel wind; an ounce or two thereof may be taken at a time. The young green nuts, taken before they be half ripe, and preserved with sugar, are of good use for those that have weak stomachs, or defluxions thereon. The distilled water of the unripe green husk is of excellent use to cool the heat of agues, being drunk an ounce or two at a time, as also to resist the infection of the plague, if some of it be also applied to the fores thereof. The same likewise cooleth the heat of green wounds and old ulcers, and healeth them. The distilled water of the green husks, when they are shelled from the nuts, being drunk with a little vinegar, is also found by experience to be good for those that are infected with the plague, so as before the taking thereof a vein be opened. The said water is very good against the quinsy, being gargled and bathed therewith, and wonderfully helpeth deafness, the noise and other pains in the ears. The distilled water of the young green leaves, in the end of May, performeth a singular cure on foul running ulcers and sores, to be bathed with wet cloths or sponges applied to them every morning.

WOLD, WELD, OR DYERS WEED.

DESCRIPTION. THE common kind groweth bushing with many leaves, long, narrow, and flat, upon the ground, of a dark bluish-green colour, somewhat like unto woad, but nothing so large; a little crumpled, and as it were round-pointed, which do so abide the first year: and, the next spring, from among them rise divers round stalks two or three feet high, beset with many such-like leaves thereon, but smaller, and shooting forth some small branches, which with the stalks carry many small yellow flowers in a long spiked head at the tops of them, where afterwards comes the seed, which is small and black, inclosed in heads that are divided at the tops into four parts. The root is long, white, and thick, abiding the winter. The whole herb changeth to be yellow after it hath been in flower a while.

PLACE. It groweth every where by the way-sides, in moist grounds as well as dry, in corners of fields and by-lanes, and sometimes all over the field. In Suffex and Kent they call it green-weed.

TIME.

TIME. It flowereth about June.

GOVERNMENT AND VIRTUES. Mathiolus saith, that the root hereof cutteth tough phlegm, digesteth raw phlegm, thinneth gross humours, dissolveth hard tumours, and openeth obstructions. Some highly commend it against the bitings of venomous creatures, to be taken inwardly, and applied outwardly to the hurt place; as also for the plague or pestilence. The people in some parts of England bruise the herb, and lay it to cuts or wounds in the hands or legs.

W H E A T.

A L L the several kinds hereof are so well known unto all people, that a description is unnecessary.

GOVERNMENT AND VIRTUES. It is under Venus. Dioscorides saith, that to eat the corns of green wheat is hurtful to the stomach, and breedeth worms. Pliny saith, that the corns of wheat roasted upon an iron pan, and eaten, are a present remedy for those that are chilled with cold. The oil, pressed from wheat between two thick plates of iron or copper heated, healeth all tetters and ringworms, being used warm, and hereby Galen saith he hath known many to be cured. Mathiolus commendeth the same oil to be put into hollow ulcers to heal them up, and it is good for chops in the hands or feet, and to make a rugged skin smooth. The green corns of wheat being chewed, and applied to the place bitten by a mad dog, heal it: slices of wheat bread soaked in red rose-water, and applied to the eyes that are hot, red, inflamed, or blood-shot, help them. Hot bread, applied for an hour at a time for three days together, perfectly healeth the kernels in the throat commonly called the king's evil. The flour of wheat, mixed with the juice of henbane, stayeth the flux of humours to the joints, being laid thereon. The said meal boiled in vinegar, helpeth the shrinking of the sinews, saith Pliny; and, mixed with vinegar and honey boiled together, healeth all freckles, spots, and pimples, on the face. Wheat-flour mixed with the yolk of an egg, honey, and turpentine, doth draw, cleanse, and heal, any bile, plague-sore, or foul ulcer. The bran of wheat-meal steeped in sharp vinegar, and then bound in a linen cloth, and rubbed on those places that have the scurf, morphew, scabs, or leprosy, will take them away, the body being first well purged and prepared. The decoction of the bran of wheat or barley is of good use to bathe those places that are bursten by a rupture; and the said bran boiled in good vinegar, and applied to swollen breasts, helpeth them, and stayeth all inflammations. It helpeth also the bitings of vipers and all other venomous creatures. The leaves of wheat-meal, applied with salt, take away hardness of the skin, warts, and hard

knots in the flesh. Wafers, put in water and drunk, stay the lask and bloody flux, and are profitably used both inwardly and outwardly for ruptures in children. Boiled in water unto a thick jelly, it stayeth spitting of blood; and, boiled with mint and butter, it helpeth hoarfeness.

W I L L O W - T R E E.

GOVERNMENT AND VIRTUES. THE Moon owns it. The leaves, bark, and seed, are used to staunch bleeding at nose and mouth, spitting of blood, and all other fluxes of blood in man or woman, and to stay vomiting, and provocation thereunto, if the decoction of them in wine be drunk. It helpeth also to stay thin, hot, sharp, salt, distillations from the head upon the lungs, causing a consumption. The leaves bruised with some pepper, and drunk in wine, much help the wind cholick. The leaves bruised, and boiled in wine and drunk, stay the heat of lust. The water that is gathered from the willow when it flowereth, the bark being slit, is very good for redness and dimness of sight, for films that grow over the eyes, and stay the rheums that fall into them; to provoke urine, being stopped, if it be drunk; and to clear the face and skin from spots and discolourings. Galen saith, the flowers have an admirable faculty in drying up humours, being a medicine without any sharpness or corrosion. The bark works the same effects, if used in the same manner; and the tree hath always bark upon it, though not always flowers. The burnt ashes of the bark, being mixed with vinegar, take away warts, corns, and superfluous flesh. The decoction of the leaves or bark in wine takes away scurf, or dandriff, by washing the place with it. It is a fine cool tree, the boughs of which are very convenient to be placed in the chamber of one sick of a fever.

W O A D.

DESCRIPTION: IT hath divers large leaves, long, and somewhat broad, like those of the greater plantane, but larger, thicker, of a greenish colour, and somewhat blue; from among which leaves riseth up a lusty stalk, three or four feet high, with divers leaves set thereon; the higher the stalk riseth, the smaller are the leaves: at the top it spreadeth into divers branches, at the end of which appear very pretty little yellow flowers, which, after they pass away, come husks, long, and somewhat flat; in form they resemble a tongue; in colour, they are black, and hang downwards. The seed contained within these husks, if it be a little chewed, gives an azure colour. The root is white and long.

PLACE.

PLACE. It is sowed in fields for the benefit of it, where those that sow it cut it three times a year.

TIME. It flowereth in June, but it is long after before the seed is ripe.

GOVERNMENT AND VIRTUES. It is a cold and dry plant of Saturn. Some people affirm the plant to be destructive to bees. They say it possesseth bees with the flux; but that I can hardly believe, unless bees be contrary to all other creatures; I should rather think it possesseth them with the contrary disease, the herb being exceedingly drying and binding. However, if any bees be diseased thereby, the cure is to set urine by them, but set it in such a vessel that they cannot drown themselves, which may be remedied, if you put pieces of cork in it. I told you the herb is so drying and binding, that it is not fit to be given inwardly. An ointment made thereof stauncheth bleeding. A plaster made thereof, and applied to the region of the spleen, takes away the hardness and pains thereof. The ointment is excellent good in such ulcers as abound with moisture, and takes away corroding and fretting humours. It cools inflammations, quencheth St. Anthony's fire, and stayeth defluxions of blood to any part of the body.

WOODBINE, OR HONEY-SUCKLES.

TIME. THEY flower in June, and the fruit is ripe in August.

GOVERNMENT AND VIRTUES. It is an herb of Mercury, and appropriated to the lungs; the celestial Crab claims dominion over it, neither is it a foe to the Lion. It is fitting a conserve, made of the flowers of it, were kept in every house; I know no better cure for an asthma; besides, it takes away the evil of the spleen, provokes urine, procures speedy delivery to women; helps cramps, convulsions, and palseys, and whatsoever griefs come of cold or stopping. Made into an ointment, it will clear the skin of morpew, freckles, and sun-burning, or whatsoever else discolours it.

W O R M W O O D*.

KINDS. THREE wormwoods are familiar with us. Sea-wormwood hath as many names as virtues, *Seripbian*, *Santonicon*, *Belgicum*, *Narbonense*, *Xantomicum*,

* The leaves have commonly been used, but the flowery tops are the right part. These, made into a light infusion, strengthen digestion, correct acidities, and supply the place of gall, where, as in many constitutions, that is deficient.

Misnenfe, and many more. The seed of this wormwood is that which usually women give their children for the worms: of all wormwoods that grow here, this is the weakest. The seeds of the common wormwood are far more prevalent than the seed of this to expel worms in children, or people of ripe age. Of both, some are weak, some are strong. The Seriphian wormseed is the weakest, and haply may prove to be fittest for weakest bodies. Let such as are strong take the common wormseed, for the other will do but little good. Its due praise is this; it is weakest, therefore fitter for weak bodies.

PLACE. It grows familiarly in England by the sea-side.

DESCRIPTION. It starts up out of the earth with many round woody hoary stalks from one root; its height is four feet, or three at the least. The leaves are long, narrow, white, hoary, like southernwood, only broader and longer, in taste rather salt than bitter, because it grows so near the salt water: at the joints with the leaves, toward the tops, it bears little yellow flowers. The root lies deep, and is woody.

Common wormwood I need not describe.

DESCRIPTION OF ROMAN WORMWOOD. The stalks are slenderer and shorter than the common wormwood by one foot at least; the leaves are more finely cut and divided than they are, but something smaller; both leaves and stalks are hoary; the flowers of a pale yellow colour; it is altogether like the common wormwood, save only that it is smaller, not so bitter, and of a sweeter smell.

PLACE. It groweth upon the tops of the mountains; but is usually nursed up in gardens for the use of the apothecaries in London.

TIME. All wormwoods usually flower in August, a little sooner or later.

GOVERNMENT AND VIRTUES. Wormwood is an herb of Mars. It is hot and dry in the first degree. viz. just as hot as your blood, and no hotter. It remedies the evils choler can inflict on the body of man by sympathy; it helps the evils Venus produces by antipathy; and it cleanseth the body of choler. It provokes urine, helps surfeits, swellings in the belly; it causeth an appetite to meat, because Mars rules the attractive faculty in man: the Sun never shone upon a better herb for the yellow jaundice than this. Take the flowers of wormwood, rosemary, and black-thorn, of each a like quantity, half that quantity of saffron, boil this in Rhenish wine, but put not in the saffron till it is almost boiled: this is the way to keep a man's body in health, appointed by Camerarius, in his book, intituled, *Hortus Medicus*. Besides all this, wormwood provokes the terms. Wormwood, being an herb of Mars, is a present remedy for the biting of rats and mice. Mushrooms are under the dominion of Saturn; if any have poisoned himself by eating them,

them, wormwood, an herb of Mars, cures him, because Mars is exalted in Capricorn the house of Saturn; and this it doth by sympathy. Wheals, pushes, black and blue spots, coming either by bruises or beatings, wormwood, the herb of Mars, helps. Mars eradicates all diseases in the throat by his herbs, (of which wormwood is one,) and this by antipathy. The eyes are under the luminaries: the right eye of a man, and the left eye of a woman, the Sun claims dominion over; the left eye of a man, and the right of a woman, are the privilege of the Moon: wormwood, an herb of Mars, cures both. Suppose a man be bitten or stung by a martial creature, imagine a wasp, a hornet, or scorpion; wormwood, an herb of Mars, gives you a present cure. Mix a little wormwood with your ink, and neither rats nor mice will touch the paper that is written with it. Wormwood is a present cure for the cholic. Moths are under the dominion of Mars; his herb, wormwood, being laid amongst clothes, will hinder moths from hurting them. Wormwood is good for an ague. A draught of wormwood-beer, taken every morning, is a certain remedy for a stinking breath. It likewise cures dimness of sight by antipathy.

W O L F - B A N E.

DESCRIPTION. IT hath a root shining within like alabaster. There are many kinds, all extremely pernicious and poisonous; for, if man or beast be wounded with arrow, knife, sword, or any other instrument, dipped in the juice of this herb, they die incurable within half an hour. The reason this herb goes by the name of wolf-bane was this: men in former ages hunting for wolves used to poison pieces of raw flesh with the juice of this herb and lay them as baits, on which the wolves died presently.

Y A R R O W*.

NAMES. CALLED also nose-bleed, mil-foil, and thousand-leaf.

DESCRIPTION. It hath many long leaves spread upon the ground, and finely cut and divided into many small parts. Its flowers are white, upon divers green stalks which rise from among the leaves.

* There is an ancient charm for curing tertian agues with yarrow. A leaf of it is to be pulled off with the left hand, pronouncing at the same time the sick man's name; and this leaf is to be taken. The same thing has been said of feverfew; for, in old times, names of plants, as well as now, were too much confounded. The feverfew seems best for the purpose.

PLACE.

PLACE. It is frequent in all pastures.

TIME: It flowereth not until the latter end of August.

GOVERNMENT AND VIRTUES. It is under the influence of Venus. An ointment of it cures wounds, and is most fit for such as have inflammations. It stops the bloody flux; the ointment of it is not only good for green wounds, but also for ulcers and fistulas, especially such as abound with moisture. It stayeth the shedding of hair, the head being bathed with the decoction of it. Inwardly taken, it helps the retentive faculty of the stomach, and such as cannot hold their water. The leaves, chewed, ease the tooth-ach; and these virtues put together shew the herb to be drying and binding.

Y U C C A, OR J U C C A.

DESCRIPTION. THIS Indian plant hath a thick tuberous root, spreading in time into many tuberous heads, whence shoot forth many long, hard, and hollow, leaves, very sharp pointed, compassing one another at the bottom, of a greyish green colour, abiding continually, or seldom falling away, with sundry hard threads running in them, and, being withered, become pliant to bind things. From the midst thereof springeth forth a strong round stalk, divided into sundry branches, whereon stand divers somewhat large white flowers, hanging downwards, consisting of six leaves with divers veins, of a weak reddish or bluish colour, spread on the back of three outer leaves, from the middle to the bottom, not reaching to the edge of any leaf; which abide not long, but quickly fall away.

PLACE AND TIME. It groweth in divers places of the West Indies, as in Virginia and New England, and flowers about the latter end of July.

VIRTUES. There hath no property hereof conducive to physical uses as yet been heard of, but some of its vices. The natives in Virginia use, for bread, the roots hereof. The raw juice is dangerous, if not deadly. It is very probable that the Indians used to poison the heads of their darts with this juice; which they usually keep by them for that purpose.

OF GATHERING, DRYING, AND PRESERVING, PLANTS, HERBS, AND FLOWERS.

THE LEAVES OF HERBS OR TREES.

CHUSE only such as are green and full of juice, pick them carefully, and cast away such as are declining, for they will putrify the rest.

Note in what place they most delight to grow, and gather them there; for betony that grows in the shadow is far better than that which grows in the sun, because it delights in the shadow: so also such herbs as delight to grow near the water should be gathered near the water, though you may find some of them upon dry ground.

The leaves of such herbs as run up to seed are not so good when they are in flower as before, (some few excepted, the leaves of which are seldom or never used:) in such cases, if through ignorance they were not known, or through negligence forgotten, you had better take the top and the flower than the leaf.

Dry them well in the sun, and not in the shadow, for, if the sun draw away the virtues of herbs, it must needs do the like by hay; which the experience of every country farmer will explode as a vulgar error.

Let the planet that governs the herb be angular, and the stronger the better. In herbs of Saturn, let Saturn be in the ascendant; in herbs of Mars, let Mars be in the mid-heaven, for in those houses they delight: let the Moon apply to them by good aspect, and let her not be in the houses of their enemies; if you cannot well stay till she apply to them, let her be with a fixed star of their nature*.

Having well dried them, put them up in brown-paper bags, and press them not too hard together, and keep them in a dry place near the fire. As for the duration of dried herbs, a just time cannot be given, for, first, such as grow upon dry grounds will keep better than such as grow on moist; secondly, such herbs as are full of juice will not keep so long as such as are drier; thirdly, such herbs as are well dried will keep longer than such as are ill dried. Yet by this you may know when they are corrupted, viz. by their loss of colour, or smell, or both; and, if they be corrupted, reason will tell you that they must needs corrupt the bodies of those people that take them. Remember to gather all the leaves in the hour of that planet that governs them.

* For this most wonderful operation of the planetary system on plants, herbs, &c. and indeed upon all things sublunary, see my Illustration of the Occult Sciences, or, Doctrine of the Stars.

OF FLOWERS.

THE flower, which is the beauty of the plant, and of none of the least use in physic, groweth yearly, and it is to be gathered when it is in its prime.

As for the time of gathering them, let the planetary hour, and the plant they come of, be observed, as above directed; as for the time of day, let it be when the sun shines upon them, that they may be dry; for, if you gather either flowers or herbs when they are wet or dewy, they will not keep. Dry them well in the sun, and keep them in papers near the fire. So long as they retain their colour and smell they are good; either of them being gone, so is their virtue also.

OF SEEDS.

THE seed is that part of the plant which is endued with faculty to bring forth its like, and it contains potentially the whole plant itself.

As for place, let them be gathered from the places where they delight to grow. Let them be fully ripe when they are gathered, and forget not the celestial harmony before-mentioned, for I have found by experience that their virtues are twice as great at such times as others: there is an appointed time for every thing under the sun. When you have gathered them, dry them a little in the sun before you lay them up. You need not be so careful of keeping them so near the fire as the other before-mentioned, because they are fuller of spirit, and therefore not subject to corrupt. As for the time of their duration, it is palpable they will keep a great many years; yet, they are best the first year, and this I make appear by a good argument, they will grow soonest the first year they be set, therefore then are they in their prime, and it is an easy matter to renew them yearly.

OF ROOTS.

OF roots, chuse such as are neither rotten nor worm-eaten, but proper in their taste, colour, and smell; such as exceed neither in softness nor hardness.

Give me leave here to deny the vulgar opinion, that the sap falls down into the root in the autumn, and rises again in the spring, as men go to bed at night, and rise again in the morning; which idle tale of untruth is so grounded in the heads, not only of the vulgar, but also of the learned, that men cannot drive it out by reason: If the sap fall into the root in the fall of the leaf, and lie there all the winter, then must the

root

root grow only in the winter, as experience witnesseth : but the root grows not at all in winter, as the same experience teacheth, but only in the summer ; for example : If you set an apple-kernel in the spring, it will grow to a pretty bigness in that summer, and be no bigger next spring : the truth is, when the Sun declines from the tropic of Cancer, the sap begins to congeal both in root and branch ; when he toucheth the tropic of Capricorn, and ascends to us-ward, it begins to get thin again by degrees, as it congealed.

The drier time you gather your roots in, the better they are : for they have the less excrementitious moisture in them. Such roots as are soft should be dried in the sun, or else hang them in the chimney corner upon a string : as for such as are hard, you may dry them any where. Such roots as are large will keep longer than such as are small : yet most of them will keep a year. Such roots as are soft should be always kept near the fire ; and take this general rule for it, if in winter you find any of your roots, herbs, or flowers, begin to grow moist, as many times they will, (for it is best to look to them once a month,) dry them by a very gentle fire ; or, if you can with convenience keep them near the fire, you may save this trouble.

OF BARKS.

BARKS which physicians use in medicines are of three sorts : of fruits, of roots, of boughs.

The barks of fruits are to be taken when the fruits are full ripe, as oranges, lemons, &c. The barks of trees are best gathered in the spring, if it be of great trees, as oaks, or the like ; because then they come easiest off, and so you may dry them if you please : but your best way is to gather all barks only for present use.

As for the bark of roots, it is thus to be gotten : take the roots of such herbs as have pith in them, as parsley fennel, &c. slit them in the middle, and when you have taken out the pith (which you may easily and quickly do) that which remains is called the bark, and is only to be used.

OF JUICES.

JUICES are to be pressed out of herbs when they are young and tender, and also of some stalks and tender tops of herbs and plants, and also of some flowers.

Having gathered the herb you would preserve the juice of, when it is very dry, bruise it well in a stone mortar with a wooden pestle ; then, having put it into a canvas bag, press it hard in a press, then take the juice and clarify it.

When

When you have clarified it, and it is cold, put it into a glass, and put so much oil on it as will cover it the thickness of two fingers; the oil will swim at top, and so keep the air from coming to putrify it; or, instead of oil, when you have clarified the juice as before, boil it over the fire till (when cold) it be the thickness of honey: then tie it down close, and keep it for use.

Whatever you gather of plants, herbs, fruits, flowers, roots, barks, seeds, &c. for medicinal purposes, either for distillation, syrups, juleps, decoctions, oils, electuaries, conserves, preserves, ointments, and the like, must be gathered when they are in the greatest vigour and fullest perfection; for in that state only are they fit to be applied for the restoration and preservation of our health; and, when they are applied, let it be done under the sympathetic influence of planets participating in the same nature; the benefits of which are so amply demonstrated in my Display of the Occult Sciences.

END OF THE HERBAL.



Amaranthus



Allheal



Alkanet



Adders-Tongue



Water Agrimony



Aloes



Alexander



Black Alder



Common Alder



Angelica



Amaranthus Flower Gentle



Anemone



Garden Arrach



Arrach, wild and Sinking



Archangel



Arjsmart



Asarabacca



Asparagus



Ash Tree



Aesculus



Aconitum



Almond Tree



Alces



Bayon.



The Botany Bush.



Barley.



Basil.



The Bay Tree



Beans.



Kidney-Branch Bean.



Larch-Boletoe



Deeds



White Betsy



Wood Betsy



The Bush Tree



Whistleberry & B. berries



Bifurc



The Bush Tree



Birdfoot



Flat Padded Birdfoot



Bishop's Weed



The Snake



Brank Urine



Bryony



Brooklime



Butcher's Broom



Broom



Brooklime



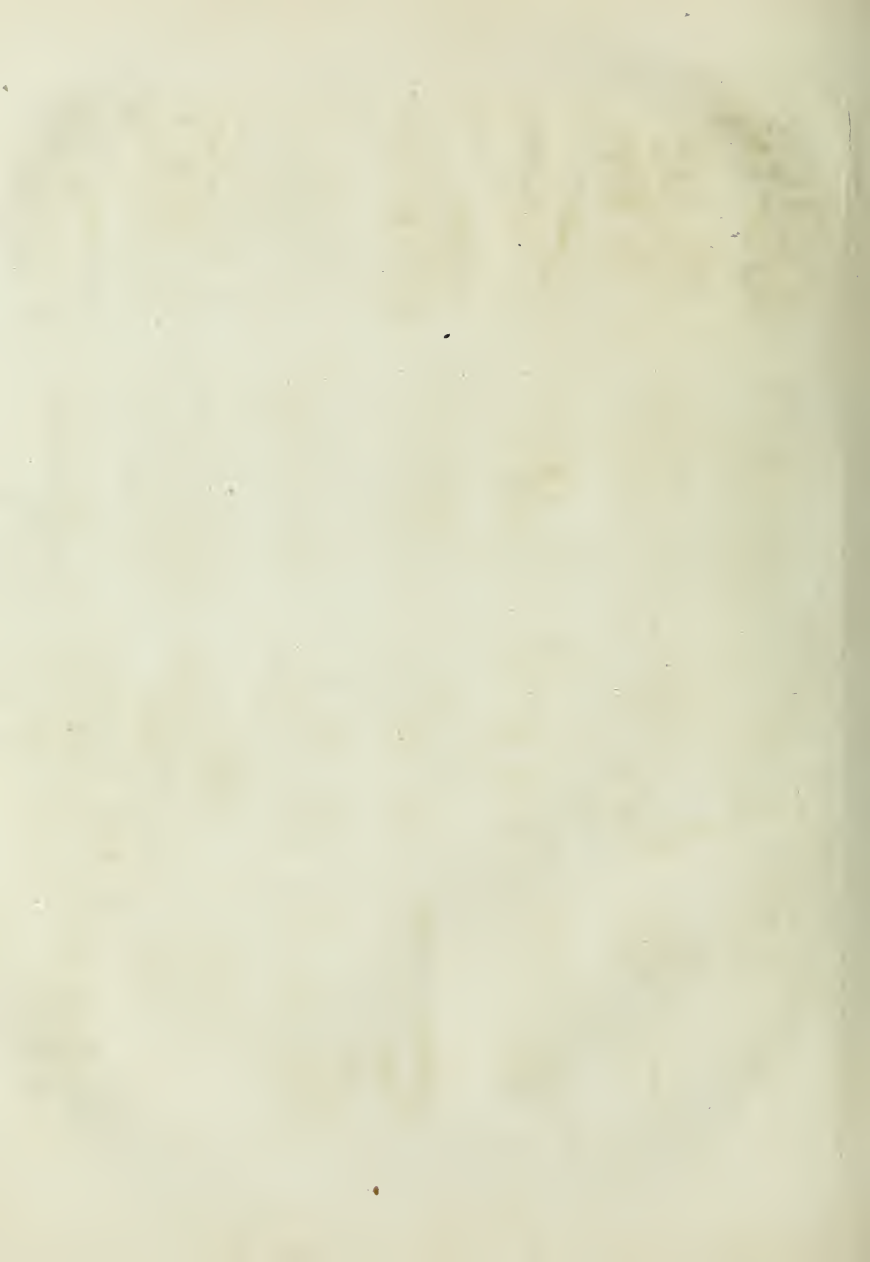
Buckhorn Plantain



Buckhorn



Bugle





Fenugreek Feltick-Nieb Common Flax Fleabane Fir Tree Gen' Garlic Gortian



Clove Gillyflower Camander Stinking Nettle Golden Rod Gerard Common Groundell Creeper o Groundell



Shrub Groundell Cooperberry Bush Round leaved Winter Green Groundsell Galangal Stock Gillyflower Wall or Yellow Gillyflower



Coll Oak Heart Ease Hartichokes Herb Tongue The Hazle Hawkweed Hawthorn

N. 3



Elder The Water-Elder The Wych Elm Endive Elcampane Enneco Narrowleaved Eyebright



Eglantine Euphorbium Great Elixerid Common Erynnon Dwarf Sea Fern Liverfew Fenell



Sea Fenell Common Hogwort Elixandula Fo Tree Water Flag Short leaved Toad Flax Flea wort



Flaxweed Flower de luce Round leaved Corner leaved Thellin Foxglove Banchus Common Horze



Costmary



Culwood



Cowslip



Crabs Claws



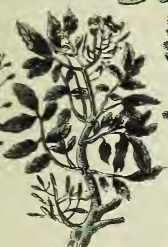
Black Cresses



Nasturtium Cresses



Fine leaved Cresses



Water Cresses



Cress Wort



broad leaved Cresswort



Cuckoo Pint



Cucumbers



Cuckoo



Currants



Cedar Tree



Coffee



Cypress



Common Female Cistus



Common Male Cistus



Cypripedium



Carol Tree



Cypripedium fistula



Cedar Tree



Cuckoo



Coriander



Colequintida



Cornal Tree



Cypress Tree



Coral



Daisy



Pandelion



Darnel



Dill



Devils Bit



Dock



Dodder



Dogs Grass



Doves Feet



Duck weed



Down or Cotton Thistle



Dragons



White Daffodill



Yellow Daffodill



Dictamnium of Candy



Double Tongue



Dunch Down



Dwarf Plane Tree



Date Tree



Hemlock.



Common Hemp.



Common Henbane.



Hedge Hyssop.



Great Wild Hellebore.



Herb Robert.



Herb Trilove.



Common Hyssop.



Hops.



White Hoarhound.



Great Water Horsetail.



Great Houseleek.



Great Handstongue.



The Holly.



Great Honeywort.



St John's Wort.



Ivy.



Juniper.



Turpentine Tree.



Indian Leaf.



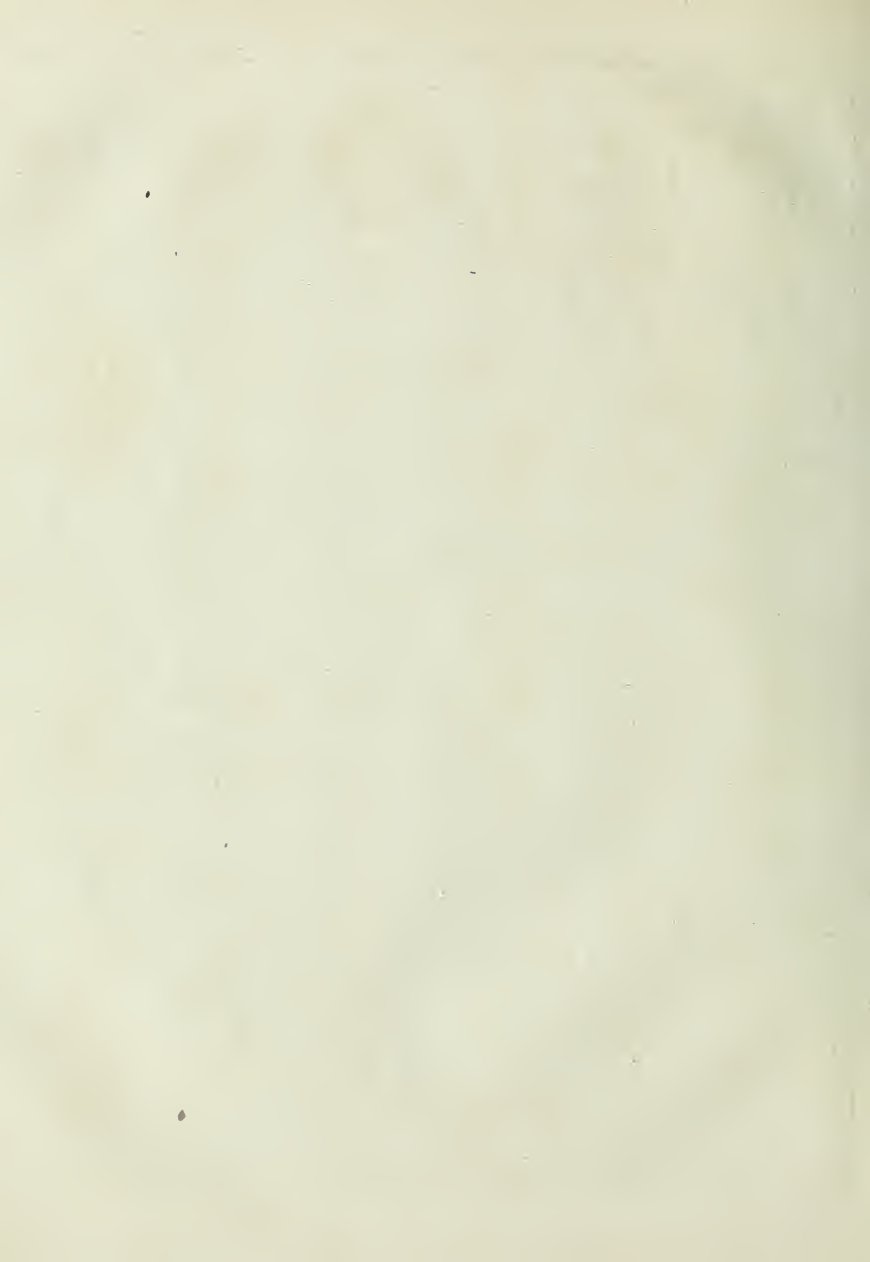
Kidney Wort.



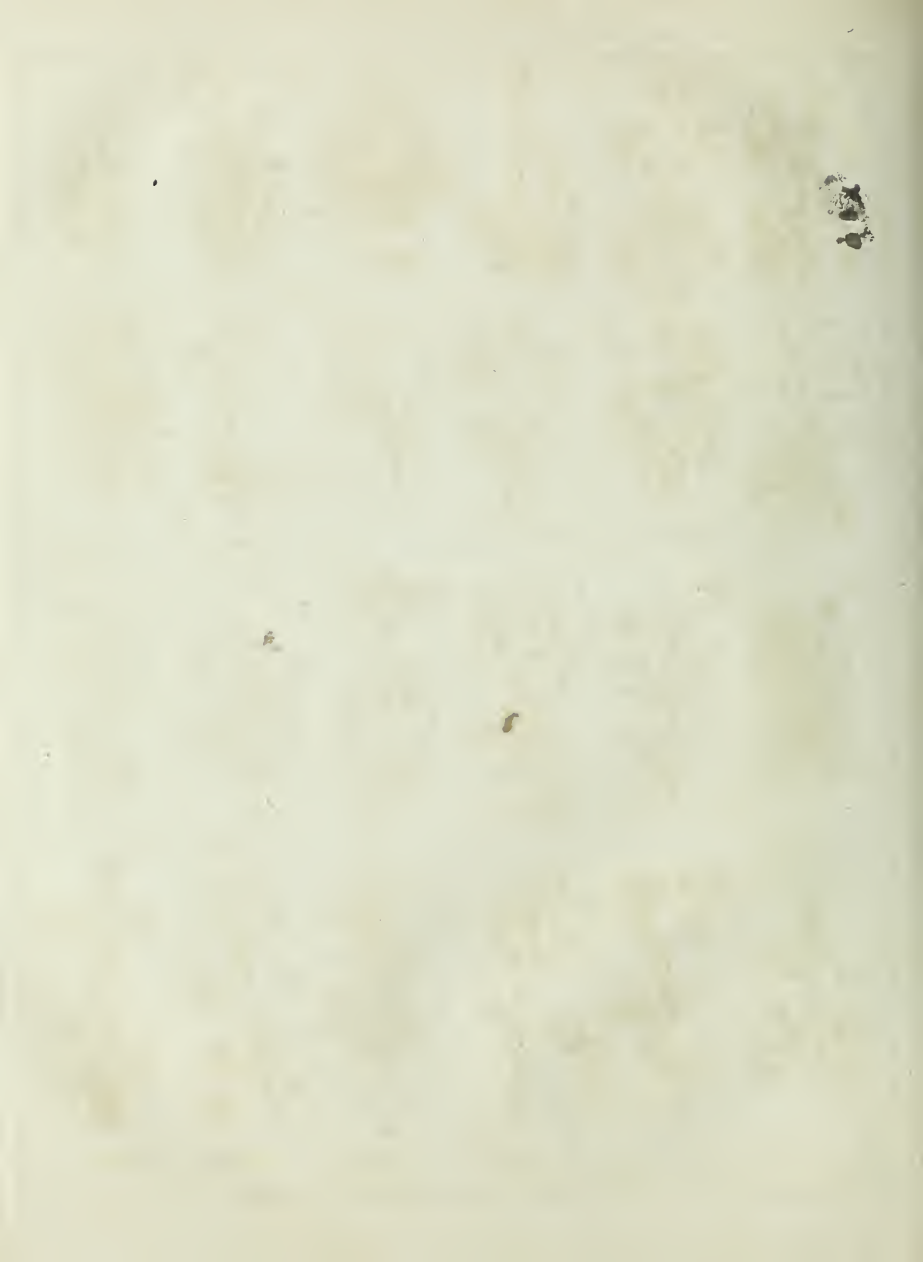
Common Knot Grass.



Kali.









Madder,



Maidenhair,



White Maiden hair,



Mace Tree,



Black Maiden hair,



Com. Mallow,



Marsh Mallow,



The Com. Maple,



Wild Marjoram,



Sweet Marjoram,



Com. Corn Marygold,



Master Wort,



Sweet Maidlin,



Medlar,



Sweet Melilot with hooked Pods,



Beach Mercury,



Dogs Mercury,



Mint,



Mifelle,



Yellow Monkwort,



Moonwort,



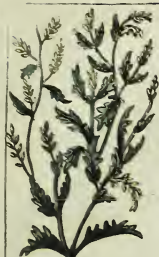
Com. Cup Moss,



Motherwort,



Mouse Ear,



Comfrey



Mulberry Tree



White Mullein



Comfrey Mustard



Hedge Mustard



Mastic Tree



Mealy Tree



Comfrey Mushroom



Mandrake



Mayweed



The Mad Apple



Nailwort



Nettle



Nettle



Comfrey Wild Nightshade



Pear fruit



Comfrey Nightshade



Narrow-leaved Bardwort



Nettle Tree



Nettle Tree



Nettle Tree



The Oak



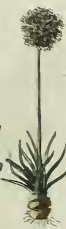
Comfrey Oat



One Blade



Orchid



Onions



Corn Marigold



Olive Tree



Orange Tree



Periwinkle



St. Peter's Wort



Red Pimpernell



Corn Ground Pine, Smooth Broad
leaved Plantain



Plums



Poly-pody



The White Poplar



Black Poppy



White Poppy



Red Poppy



Corn Purslain



Parsley



Stone Parsley



Cow Parsnip



Wild Parsnip



Garden Parsnip



Peach Tree



The Wild Bear



Prickly Asparagus



Bramble



Blites



Borage



Buglofs



Blue Bottle



Burnet



Butler Bur



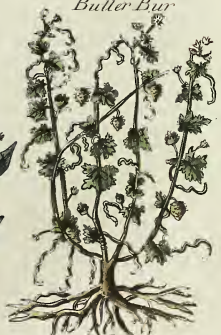
Burdock



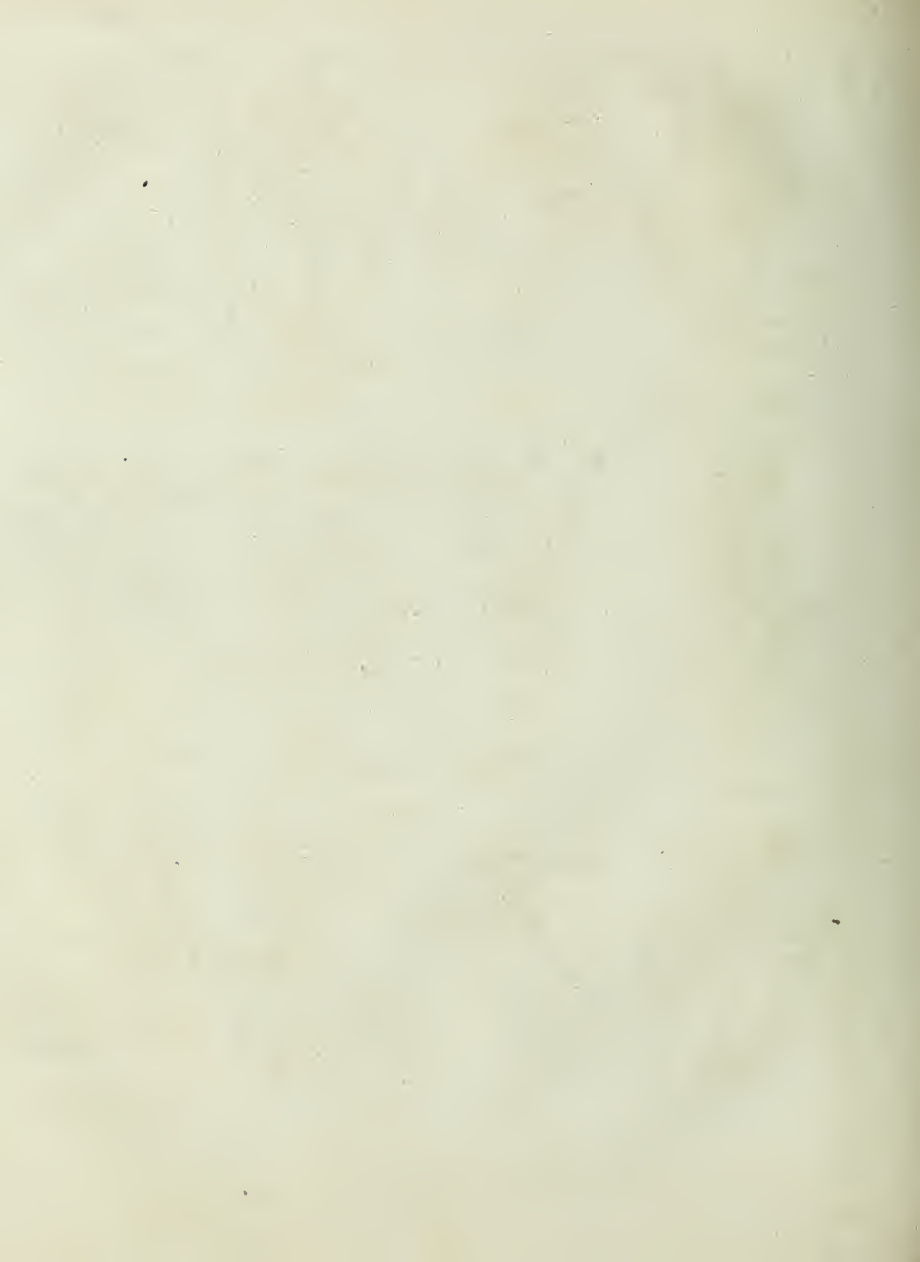
Buck wheat

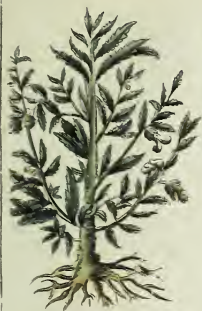


Blackbird wheat



Male Balsam tree





Female Balsam Tree



Cabbage



Colewort



Red Colewort



Sea Colewort



Catmint



Chamomile



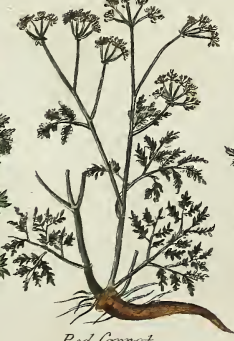
Catnip



Wild Campion



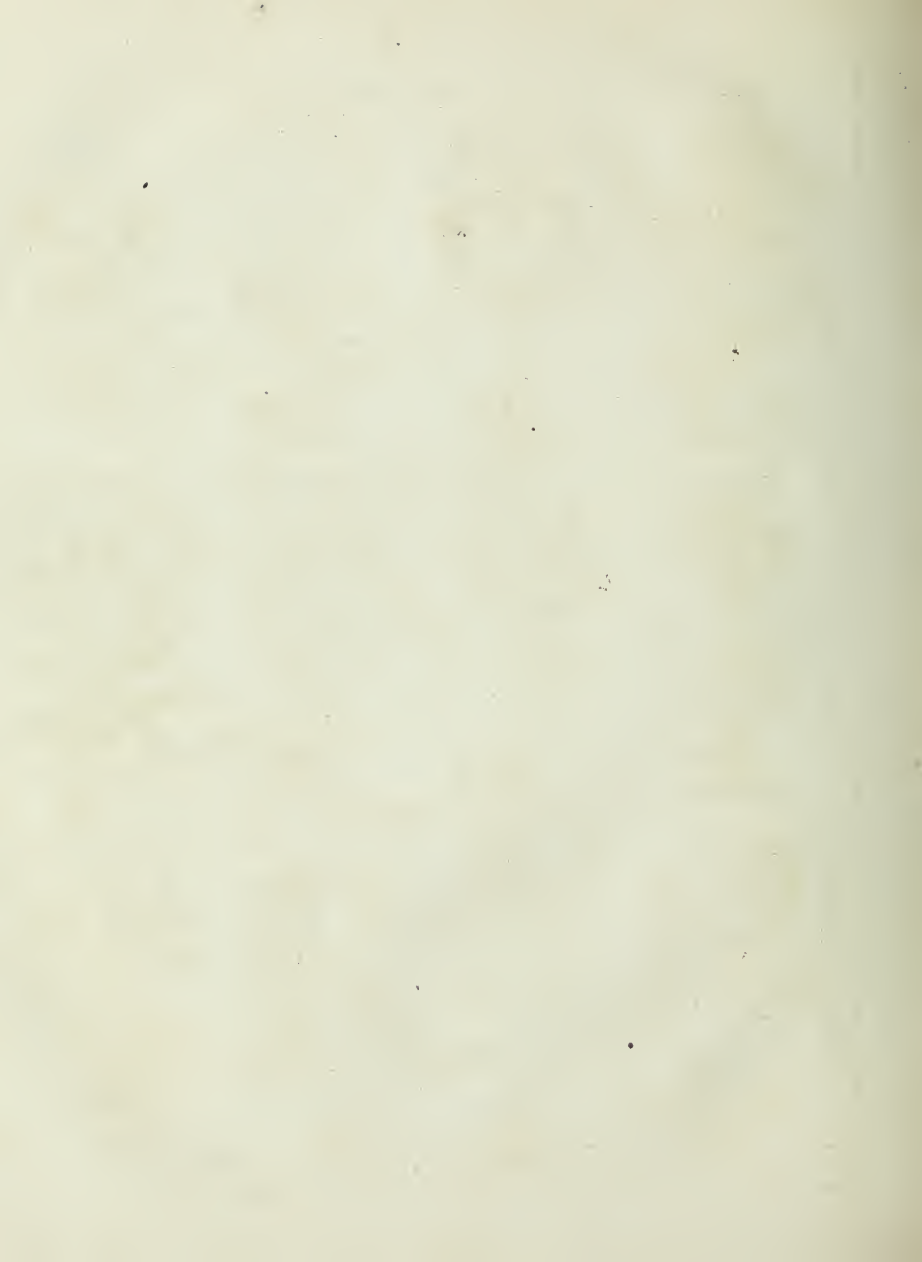
Cardus benedictus



Red Carrot



Yellow Carrot





Carraway



Celandine



Lesser Celandine



Great Centaury



Small Centaury



Cherry Tree



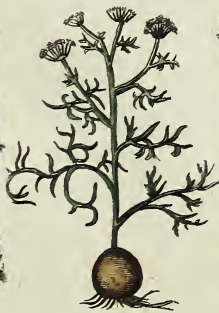
Winter Cherries



Chervil



Sweet Chervil



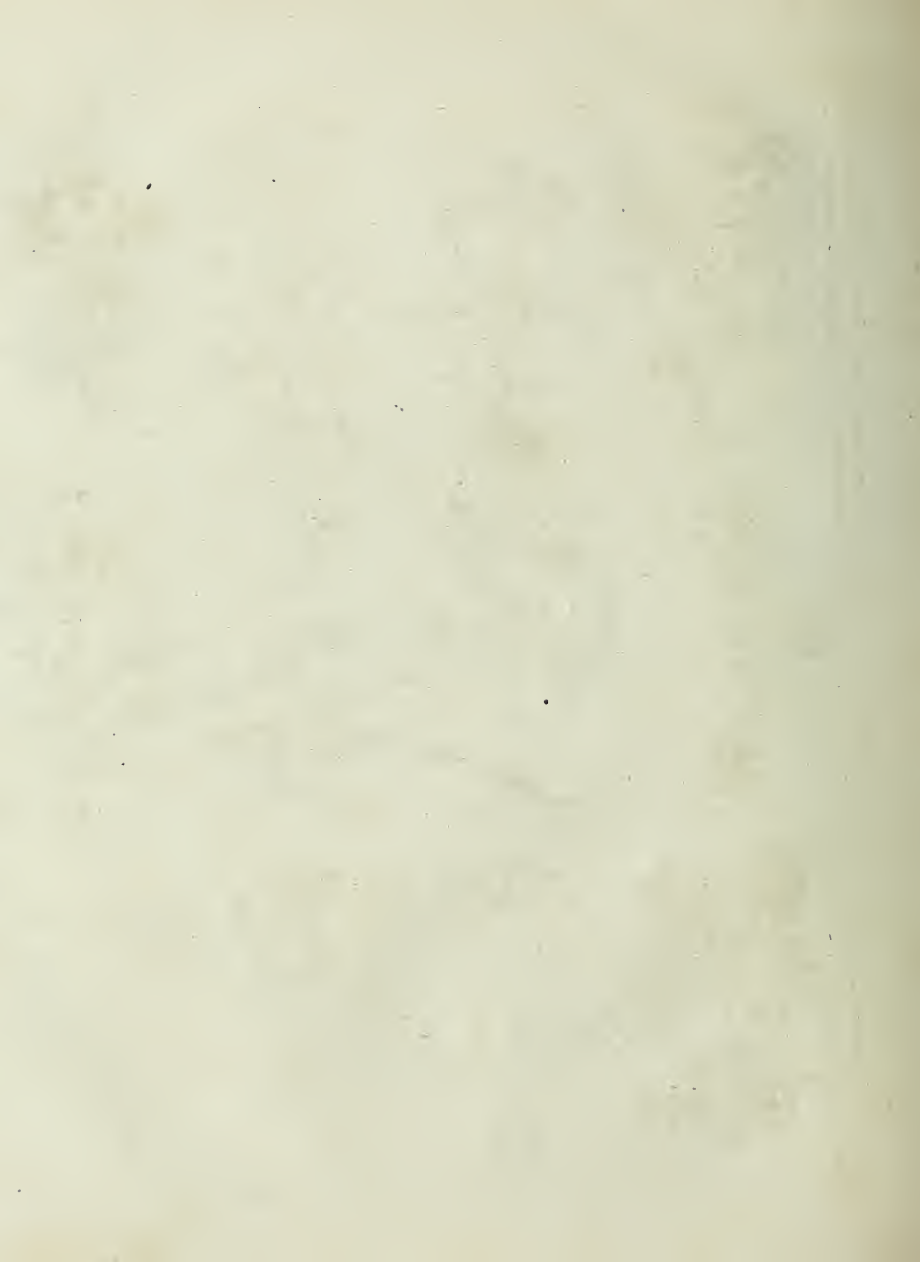
Earth Chefnut



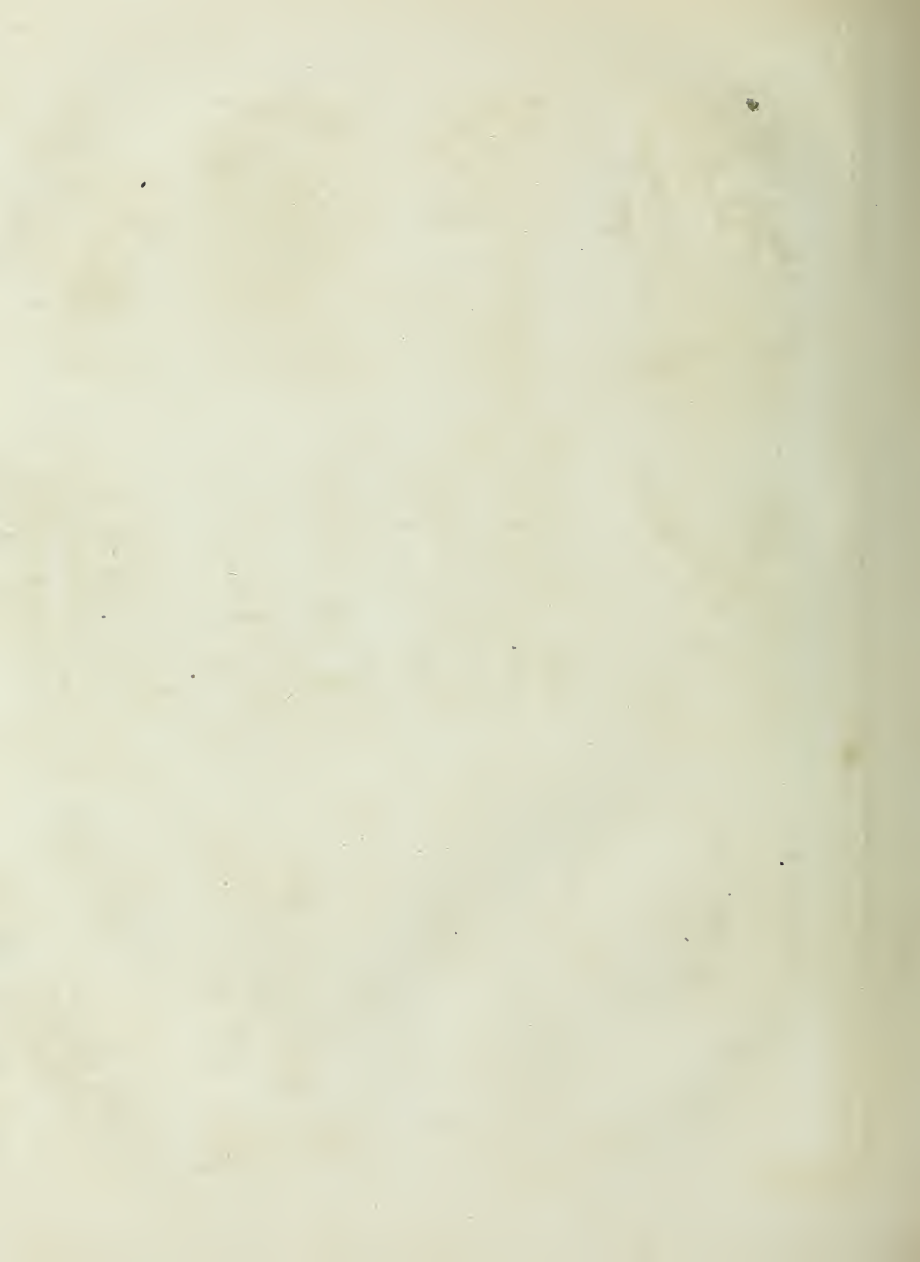
Great Chickweed



Common Chickweed



*Chick pease.**Sheep's Chick pease.**White Linguefoil.**Red Linguefoil.**Gias.**Clary.**Wild Clary.**Cleavers.**Clowns Woundwort.**Lockshead.**Columbine.**Coltsfoot.*





Comfrey.



Carob Tree.



False Dictamnin.



Gold Maidenhair.



Pellitory of Spain.



Pellitory of the Wall.



Penny Royal.



Female Pioney.



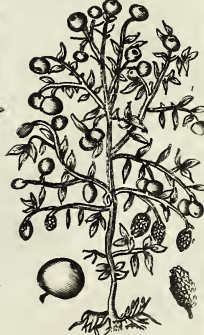
Pepper wort.



Primroses.



Privet.



Pomegranate Tree.



Pomegranate Tree.



Queen of the Meadows.



Quince Tree.



Quick Grass.



Garden Radish.



Wild Radish.



Ragwort.



Red Rattle Grass.



Yellow Rattle Grass.



Rest Harrow.



Rocket.



Wild Rocket.

*Winter Rocket.**Male Pioncy.**Roses.**Rosa Solis.**Rosemary.**Rhubarb**Monks Rhubarb.**Bastard Rhubarb.**Small Bastard Rhubarb.**Garden Rue.**Meadow Rue.**Rupture wort.*



The Pithy Rush.



Common Rushes.



Rye.



Rice.



Aromatic Reed.



Saffron.



Bastard Saffron.



Small Sage.



Broad Sage.



Wood Sage.



Great Solomons Seal.



Small Solomons Seal.



First Samphire.



Second Samphire.



Third Samphire.



Sanicle.



Great Sanicle.



Saracens Consound.



Sauce Alone.



Summer Savory.



Winter Savory.



Savin.



White Saxifrage.



Golden Saxifrage.



Burnet-Saxifrage.



Great Scabious.



Sheeps Scabious.



Third Scabious



Scurvy Grass



First Self heal



Second Self heal



Service Tree.



Shepherd's purse.



Smallage.



Soap wort



Sorrel.



Roman Sorrel.



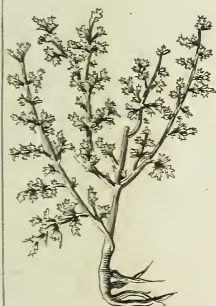
Wood Sorrel.



Milk Thistle.



Sweet Thistle.



Great Southernwood.



Small Southernwood.



Spiguel.



Large Spleenwort.



Small Spleenwort.



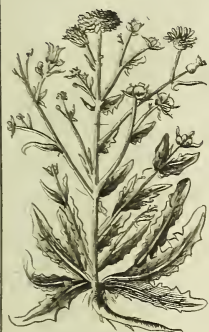
Star Thistle.



Strawberries.



Succory.



Yellow Succory.



Garden Succory.



Great Stone crop.



Wall Stone crop.



Yellow Stone crop.



Sarsaparilla.



Sanders.



Scammony.



Sebestan.



Wild Sebestan.



Sena.



Sycamore Tree.



Spikenard.



English Spikenard.



Storax Tree.



Swallow wort.



Tobacco.



Short leaved Tobacco.



Small Tobacco.



Tamerisk Tree.



Garden Tansy.



Wild Tansy.



Melancholy Thistle.



Ladies Thistle.



Woolly or Cotton Thistle.



Globe Thistle.



Fullers Thistle.



Wild Thistle.



Trade Mustard



Nitridate Mustard.



Black Thorn.



Thorough Wax.



Common Thyme.



Thyme of Candia.



Mother Thyme.



Wild Thyme.



Tormentil.



Great Turnsole.



Small Turnsole.



Meadow Trefoil.



Heart Trefoil.



Pearl Trefoil



Sweet Trefoil



Wild Trefoil



Stone Trefoil.



Tuscan or Park leaves



Garden Valerian



Great Wild Valerian.



Small Wild Valerian.



Greekish Valerian.



Upright Vervain.



Flat Vervain.



Low Vervain.



Vine.



Purple Violets.



Yellow Violets.



Strange Violets



Vipers Bugloss.



Garden Bugloss.



Wild Bugloss.



Wall Flower.



Winter Gilly Flower.



Stock Gilly Flower.



Walnut Tree.



Wild, or Dyers weed.



Common Wheat.



Spelt Wheat.



Typh Wheat.



Roman Wheat.



White Willow.



Common Willow.



Woad.



Garden Wood.



Wild Wood.



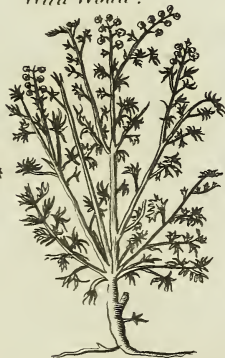
Hony-suckle.



Woodbine.



Common Wormwood.



Sea Wormwood.



Roman Wormwood.



Great Blue Wolfbane.



Small Blue Wolfbane.



Yellow Wolfbane.



Yarrow.



Eruca.

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